



Search Report

EIC 1700

STIC Database Tracking Number: 277937

To: MICHAEL BERNSHTEYN
Location: REM-10D25
Art Unit: 1796
Monday, November 17, 2008

Case Serial Number: 10/571998

From: USHA SHRESTHA
Location: EIC1700
REM-4B28
Phone: (571)272-3519

usha.shrestha@uspto.gov

Search Notes

Examiner BERNSHTEYN:

Please see the search results, feel free to contact me if you have any questions or if you like to refine the search query. Thank you for using STIC services!

Regards,
Usha



EIC 1700

SEARCH REQUEST

SCIENTIFIC REFERENCE BR
Sci & Tech Inf. Ctr

NOV 13 REC'D

Pat. & T.M. Office

Today's Date 11/13/2008

Name Michael Bernshteyn

AU/Org. 1796 Examiner # 81575

Bld.&Rm.# Rem.10025 Phone 272-2411

Priority App. Filing Date 09/12/2003

Case/App. # 10/571,998

Format for Search Results

EMAIL

PAPER

If this is a Board of Appeals case, check here

Synonyms

Describe this invention in your own words.

Terms to avoid

Additional Comments

Please, try to find a copolymer having compounds of (I) and (II) as per claim 1, and further comprises compound of formula (3) as per claim 10; polymer solid electrolyte as per claims 25, 26, 34; a copolymer including block chains as per claims 56, 77 and 97.

Thank you

M. Bernshteyn

Please submit completed form to your EIC. SPE Signature here indicates Rush

Rdy Gholshahi



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BIB DATA SHEET

CONFIRMATION NO. 1278

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/571,998		252	1796	20241/0207047-US0

APPLICANTS

Hiroo Muramoto, Chiba-shi, JAPAN;
 Takeshi Niitani, Ichihara-shi, JAPAN;
 Koichiro Aoyagi, Chiba-shi, JAPAN;

** CONTINUING DATA *****

This application is a 371 of PCT/JP04/00576 01/23/2004

** FOREIGN APPLICATIONS *****

JAPAN 2003-321155 09/12/2003

** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **

11/11/2006

Foreign Priority claimed	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Met after Allowance /MB/ Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
35 USC 119(a-d) conditions met	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		JAPAN	3	16	9

ADDRESS

DARBY & DARBY P.C.
 P.O. BOX 770
 Church Street Station
 New York, NY 10008-0770
 UNITED STATES

TITLE

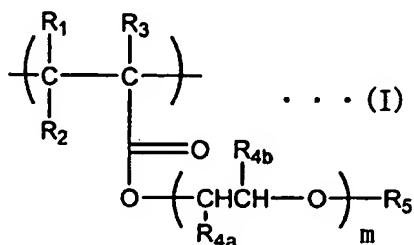
Composition for polymer solid electrolyte, polymer solid electrolyte, polymer, polymer solid electrolyte battery, ionconductive membrane, copolymer and process for producing the copolymer

FILING FEE RECEIVED 2350	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	<input type="checkbox"/> All Fees
		<input type="checkbox"/> 1.16 Fees (Filing)
		<input type="checkbox"/> 1.17 Fees (Processing Ext. of time)
		<input type="checkbox"/> 1.18 Fees (Issue)
		<input type="checkbox"/> Other _____
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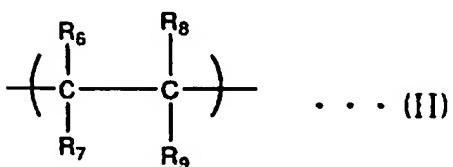
ABSTRACT

The present invention provides a polymer solid electrolyte excellent in thermal properties, physical properties and ion conductivity and being close to practical level; especially, a totally solid electrolyte and a composition for producing the same. A composition for polymer solid electrolyte includes a copolymer having repeating units represented by

Formula (I):



(wherein each of R₁ to R₃ independently represents a hydrogen atom or a C₁-C₁₀ hydrocarbon group; R_{4a} and R_{4b} independently represents a hydrogen atom or a methyl group; R₅ represents a hydrogen atom, a hydrocarbon group, an acyl group or a silyl group; and m is an integer of 1 to 100), and repeating units represented by Formula (II):



(wherein each of R₆ and R₈ independently represents a hydrogen atom or a C₁-C₁₀ hydrocarbon group; R₉ represents an organic group having at least one functional group selected from the group consisting of hydroxyl group, carboxyl group, epoxy group, acid anhydride group and amino group); and

an electrolyte salt.

Application No. 10/571,998
Amendment dated July 28, 2008
Reply to Non-Final Office Action of April 29, 2008

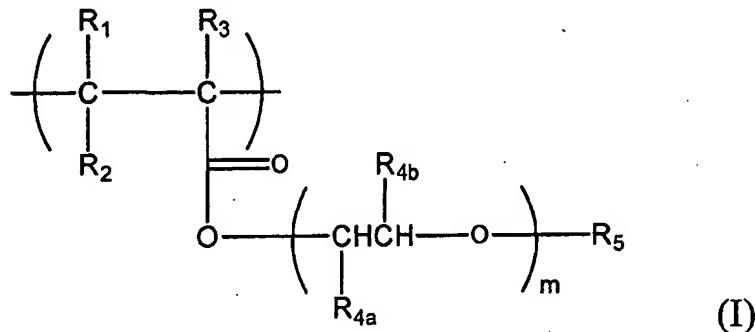
Docket No.: 20241/0207047-US0

It is believed that no additional fees are required for this Response. However, should additional fees be necessary in connection with the filing of this Response, or if a petition for extension of time is required for timely acceptance of the same, the Commissioner is hereby authorized and requested to charge Deposit Account No. 04-0100 for any such fees, and Applicant hereby petitions for any needed extension of time.

AMENDMENTS TO THE CLAIMS

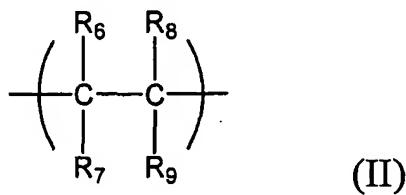
The following listing of claims replaces all prior versions, and listings, of claims in this application.

Claim 1 (Currently Amended): A composition for a polymer solid electrolyte comprising a copolymer having repeating units represented by Formula (I):



wherein each of R₁ to R₃ independently represents a hydrogen atom or a C1-C10 hydrocarbon group; R₁ and R₃ may bond to one another to form a ring; each of R_{4a} and R_{4b} independently represents a hydrogen atom or a methyl group; R₅ represents a hydrogen atom, a hydrocarbon group, an acyl group or a silyl group; m is an integer of 1 to 100, and each of R_{4a} and each of R_{4b} may be the same or different when m is 2 or more;

and repeating units represented by Formula (II):



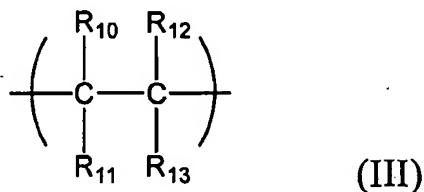
wherein each of R_6 and R_8 independently represents a hydrogen atom or a C1-C10 hydrocarbon group; R_6 and R_8 may bond to one another to form a ring; R_7 represents a hydrogen atom, a C1-C10 hydrocarbon group, a hydroxyl group, a hydrocarbonoxy group, a carboxyl group, an acid anhydride group, an amino group, an ester group, or an organic group having at least one functional group selected from the group consisting of hydroxyl group, carboxyl group, three-membered-ring epoxy group, acid anhydride group and amino group; and R_9 represents an organic group having at least one functional group selected from the group consisting of hydroxyl group, carboxyl group, three-membered-ring epoxy group, acid anhydride group and amino group;

and an electrolyte salt.

Claims 2-8 (Canceled).

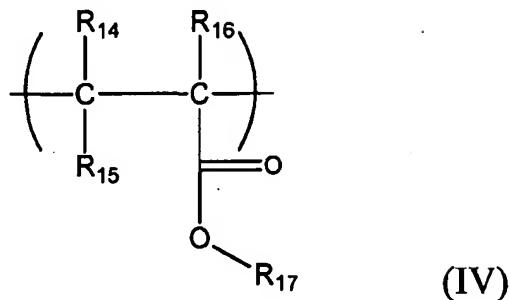
Claim 9 (Currently Amended): The composition for a polymer solid electrolyte according to Claim [[1]]1, the copolymer further comprising a repeating unit derived from a polymerizable unsaturated monomer, which is different from the repeating units represented by Formula (I) and Formula (II).

Claim 10 (Previously Presented): The composition for a polymer solid electrolyte according to Claim 9, wherein the repeating unit derived from polymerizable unsaturated monomers comprises at least one repeating unit selected from the group consisting of units represented by Formula (III)



wherein each of R_{10} to R_{12} independently represents a hydrogen atom or a C1-C10 hydrocarbon group, and R_{13} represents an aryl group or a heteroaryl group;

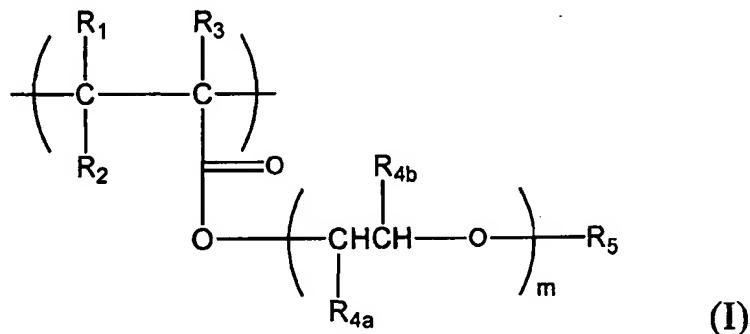
and units represented by Formula (IV)



wherein each of R₁₄ to R₁₆ independently represents a hydrogen atom or a C1-C10 hydrocarbon group; R₁₄ and R₁₆ may bond to one another to form a ring; and R₁₇ represents a C1-C12 alkyl group, an aryl group, an alicyclic hydrocarbon group, or a heterocyclic group.

Claims 11-24 (Cancelled).

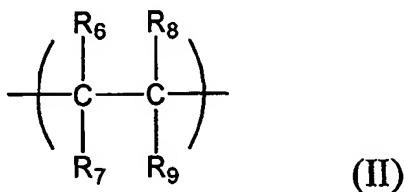
Claim 25 (Currently Amended): A polymer solid electrolyte comprising:
a copolymer having repeating units represented by Formula (I):



wherein each of R₁-R₃ independently represents a hydrogen atom or a C1-C10 hydrocarbon group; R₁ and R₃ may bond to one another to form a ring; each of R_{4a} and R_{4b} independently represents a hydrogen atom or a methyl group; R₅ represents a hydrogen atom, a hydrocarbon group, an acyl

group or a silyl group; m is an integer of 1 to 100, and each of R_{4a} and R_{4b} may be the same or different when m is 2 or more;

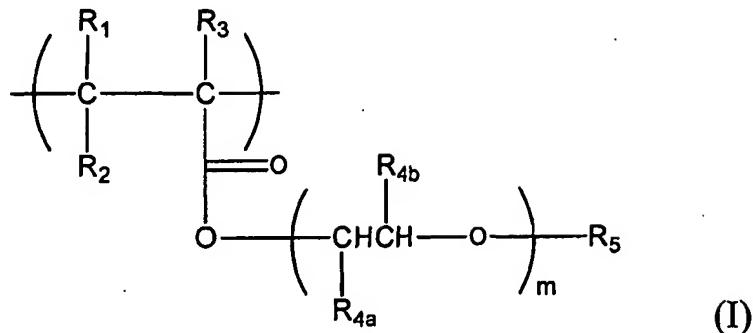
and repeating units represented by Formula (II):



wherein each of R₆ and R₈ independently represents a hydrogen atom or a C1-C10 hydrocarbon group; R₆ and R₈ may bond to one another to form a ring; R₇ represents a hydrogen atom, a C1-C10 hydrocarbon group, a hydroxyl group, a hydrocarbonoxy group, a carboxyl group, an acid anhydride group, an amino group, an ester group, or an organic group having at least one functional group selected from the group consisting of hydroxyl group, carboxyl group, three-membered-ring epoxy group, acid anhydride group and amino group; and R₉ represents an organic group having at least one functional group selected from the group consisting of hydroxyl group, carboxyl group, three-membered-ring epoxy group, acid anhydride group and amino group;

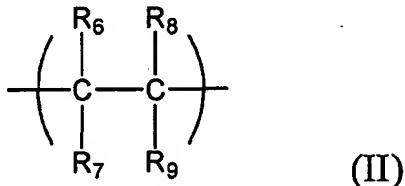
and an electrolyte salt.

Claim 26 (Currently Amended): A polymer solid electrolyte comprising:
a cross-linked polymer obtained by a reaction of a cross-linking agent with a copolymer
having repeating units represented by Formula (I):



wherein each of R₁-R₃ independently represents a hydrogen atom or a C1-C10 hydrocarbon group; R₁ and R₃ may bond to one another to form a ring; each of R_{4a} and R_{4b} independently represents a hydrogen atom or a methyl group; R₅ represents a hydrogen atom, a hydrocarbon group, an acyl group or a silyl group; m is an integer of 1 to 100, and each of R_{4a} and each of R_{4b} may be the same or different when m is 2 or more;

and repeating units represented by Formula (II):



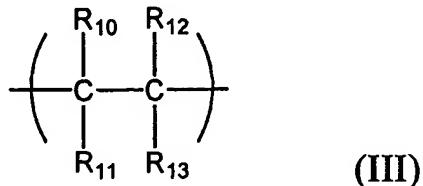
wherein each of R₆ and R₈ independently represents a hydrogen atom or a C1-C10 hydrocarbon group; R₆ and R₈ may bond to one another to form a ring; R₇ represents a hydrogen atom, a C1-C10 hydrocarbon group, a hydroxyl group, a hydrocarbonoxyl group, a carboxyl group, an acid anhydride group, an amino group, an ester group, or an organic group having at least one functional group selected from the group consisting of hydroxyl group, carboxyl group, three-membered-ring epoxy group, acid anhydride group and amino group; and R₉ represents an organic group having at least one functional group selected from the group consisting of hydroxyl group, carboxyl group, three-membered-ring epoxy group, acid anhydride group and amino group;

and an electrolyte salt.

Claims 27-32 (Canceled).

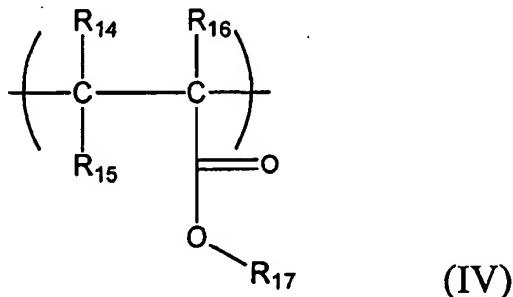
Claim 33 (Currently Amended): The polymer solid electrolyte according to Claim 25, wherein the copolymer further ~~comprising~~comprises a repeating unit derived from a polymerizable unsaturated monomer, which is different from the repeating units represented by the Formula (I) and the Formula (II).

Claim 34 (Previously Presented): The polymer solid electrolyte according to Claim 33, wherein the repeating unit derived from polymerizable unsaturated monomers is at least one repeating unit selected from the group consisting of units represented by Formula (III)



wherein each of R₁₀ to R₁₂ independently represents a hydrogen atom or a C1-C10 hydrocarbon group, and R₁₃ represents an aryl group or a heteroaryl group;

and units represented by Formula (IV)



wherein each of R₁₄ to R₁₆ independently represents a hydrogen atom or a C1-C10 hydrocarbon group; R₁₄ and R₁₆ may bond to one another to form a ring; and R₁₇ represents a C1-C12 alkyl group, an aryl group, an alicyclic hydrocarbon group, or a heterocyclic group.

Claims 35-50 (Canceled).

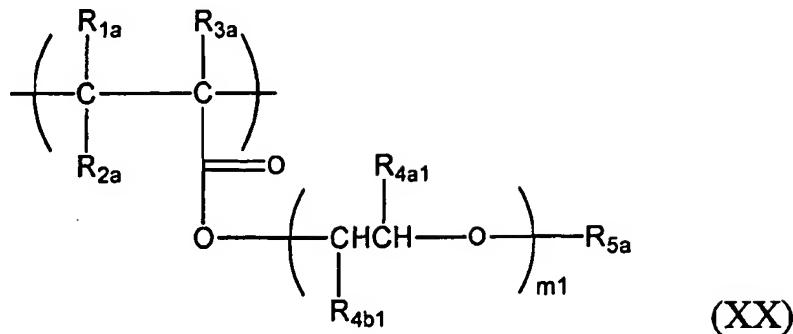
Claim 51 (Withdrawn): A polymer comprising; a polymer segment (P1) having an ion-conductivity, a polymer segment (P2) not having an ion-conductivity, and a polymer segment (P3) having a cross-linking point, the polymer being disposed in an order of P3, P2, P1, P2, and P3.

Claim 52 (Canceled).

Claim 53 (Withdrawn): A polymer solid electrolyte comprising a cross-linked polymer obtained by a reaction of a polymer with a cross-linking agent, and an electrolytic salt, wherein the polymer includes a polymer segment (P1) having an ion-conductivity, a polymer segment (P2) not having an ion-conductivity, and a polymer segment (P3) having a cross-linking point, the polymer being disposed in an order of P3, P2, P1, P2, and P3.

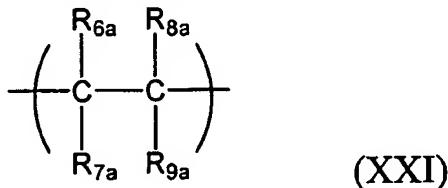
Claims 54-55 (Canceled).

Claim 56 (Currently Amended): A polymer solid electrolyte battery comprising an electrode which comprises an electrode-activating compound and a copolymer including a disposition of block chains arranged in an order of B11, A11 and C11, wherein the block chain A11 includes a repeating unit represented by Formula (XX)



wherein each of R_{1a} [[and]] to R_{3a} independently represents a hydrogen atom or a C1-C10 hydrocarbon group; R_{1a} and R_{3a} may bond to one another to form a ring; each of R_{4a1} and R_{4b1} independently represents a hydrogen atom or a methyl group; R_{5a} represents a hydrogen atom, a hydrocarbon group, an acyl group or a silyl group; m1 represents an integer of 2 to 100; and R_{4a1} and R_{4b1} may be the same or different from each other,

and the block chain B11 includes a repeating unit represented by Formula (XXI):



wherein each of R_{6a} to R_{8a} independently represents a hydrogen atom or a C1-C10 hydrocarbon group; and R_{9a} represents an aryl group.

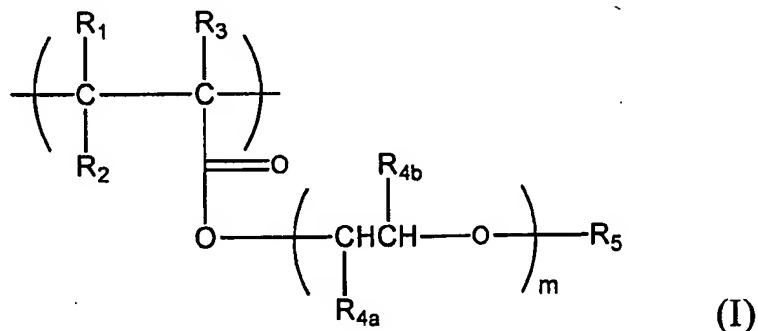
Claims 57-73 (Canceled).

Claim 74 (Withdrawn): An ion-conductive membrane comprising: a membrane which includes a polymer segment (P1) having an ion-conductivity, a polymer segment (P2) not having an ion-conductivity, and a cross-linked polymer segment (P4), wherein a network type microphase-separated structure is included in the membrane.

Claim 75 (Withdrawn): An ion-conductive membrane comprising: a membrane containing a cross-linked polymer which is obtained by a reaction of a polymer with a cross-linking agent, wherein the polymer includes a polymer segment (P1) having an ion-conductivity, a polymer segment (P2) not having an ion-conductivity, and a polymer segment (P3) having a cross-linking point, wherein a network type microphase-separated structure is included in the membrane.

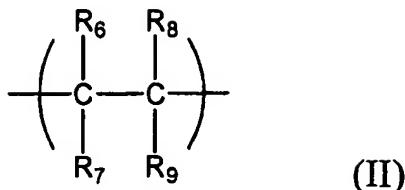
Claim 76 (Withdrawn): An ion-conductive membrane according to Claim 75, wherein the polymer forms a microphase-separated structure.

Claim 77 (Currently Amended): A copolymer having an arrangement of block chains in an order of B1, C1, A, C2, and B2, wherein the block chain A has a repeating unit represented by Formula (I):



wherein each of R₁-R₃ independently represents a hydrogen atom or a C1-C10 hydrocarbon group; R₁ and R₃ may bond to one another to form a ring; each of R_{4a} and R_{4b} independently represents a hydrogen atom or a methyl group; R₅ represents a hydrogen atom, a hydrocarbon group, an acyl group or a silyl group; m is an integer of 1 to 100, and each of R_{4a} and each of R_{4b} may be the same or different when m is 2 or more;

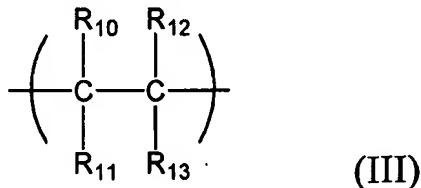
the block chain B1 has a repeating unit represented by Formula (II):



wherein each of R₆ and R₈ independently represents a hydrogen atom or a C1-C10 hydrocarbon group; R₆ and R₈ may bond to one another to form a ring; R₇ represents a hydrogen atom, a C1-C10 hydrocarbon group, a hydroxyl group, a hydrocarbonoxy group, a carboxyl group, an acid anhydride group, an amino group, an ester group, or an organic group having at least one functional group selected from the group consisting of hydroxyl group, carboxyl group, three-membered-ring epoxy group, acid anhydride group and amino group; and R₉ represents an organic group having at least one functional group selected from the group consisting of hydroxyl group, carboxyl group, three-membered-ring epoxy group, acid anhydride group and amino group;

the block chain B2 has a repeating unit represented by Formula (II) which may be the same as or different from B1;

the block chain C1 has a repeating unit represented by Formula (III):



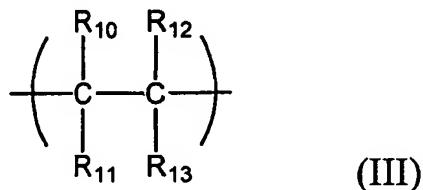
wherein each of R₁₀ to R₁₂ independently represents a hydrogen atom or a C1-C10 hydrocarbon group, and R₁₃ represents an aryl group or a heteroaryl group; and

the block chain C2 has a repeating unit represented by Formula (III) which may be the same as or different from C1.

Claims 78-95 (Cancelled).

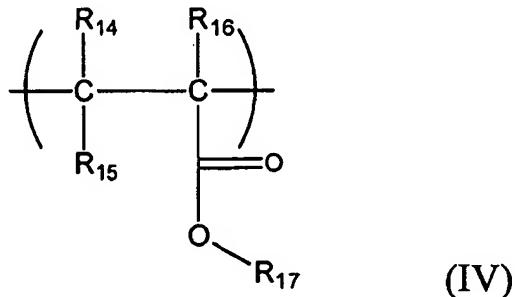
Claim 96 (Currently Amended): The polymer solid electrolyte according to Claim 26, wherein the copolymer further comprises a repeating unit derived from a polymerizable unsaturated monomer, which is different from the repeating units represented by the Formula (I) and the Formula (II).

Claim 97 (Currently Amended): The polymer solid electrolyte according to Claim [[33,]]96, wherein the repeating unit derived from polymerizable unsaturated monomers is at least one repeating unit selected from the group consisting of units represented by Formula (III)



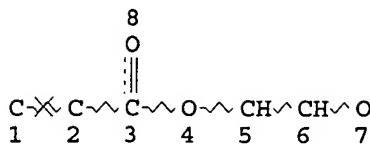
wherein each of R₁₀ to R₁₂ independently represents a hydrogen atom or a C1-C10 hydrocarbon group, and R₁₃ represents an aryl group or a heteroaryl group;

and units represented by Formula (IV)



wherein each of R₁₄ to R₁₆ independently represents a hydrogen atom or a C1-C10 hydrocarbon group; R₁₄ and R₁₆ may bond to one another to form a ring; and R₁₇ represents a C1-C12 alkyl group, an aryl group, an alicyclic hydrocarbon group, or a heterocyclic group.

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 L7 SCR 2043
 L9 STR



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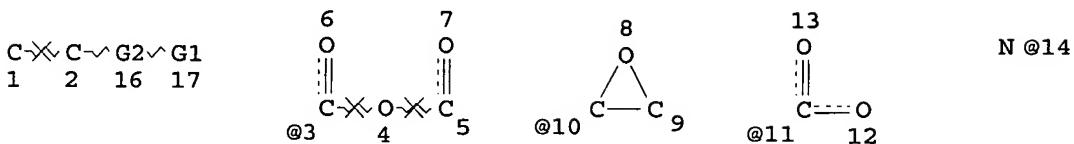
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 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

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 NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L11 STR



VAR G1=3/10/11/14/OH

REP G2=(1-20) A

NODE ATTRIBUTES:

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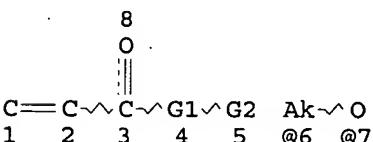
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RSPEC 8

NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE

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 L23 132698 SEA FILE=REGISTRY ABB=ON PLU=ON PSTY/PCT
 L29 STR



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VAR G2=OH/7

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

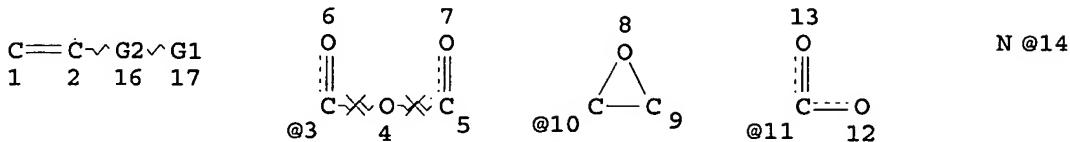
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RING(S) ARE ISOLATED OR EMBEDDED
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STEREO ATTRIBUTES: NONE

L33 STR



VAR G1=3/10/11/14/OH

REP G2=(1-20) A

NODE ATTRIBUTES:

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NSPEC IS RC AT 5
NSPEC IS RC AT 14

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 8

NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE

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L49	15426 SEA FILE=REGISTRY ABB=ON	PLU=ON	L39 AND (L46 OR L47 OR L48)
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L92	8 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L90 OR L91

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L92 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:612574 HCAPLUS

DOCUMENT NUMBER: 143:136276

TITLE: Polymer solid electrolytes for batteries

INVENTOR(S): Shimada, Mikiya; Niitani, Takeshi

PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan

SOURCE: PCT Int. Appl., 33 pp.

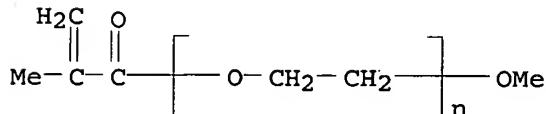
DOCUMENT TYPE: CODEN: PIXXD2
 Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005064620	A1	20050714	WO 2004-JP19710	20041222
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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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PRIORITY APPLN. INFO.:			JP 2003-430626	A 20031225
			<--	
			JP 2004-296309	A 20041008

ED Entered STN: 15 Jul 2005
 AB Disclosed is a polymer solid **electrolyte** having both excellent ion conductivity and shape stability. A polymer solid **electrolyte** was characterized by containing a polymer having an ion-conducting region, an additive having at least one chemical bond selected from the group consisting of urethane bond, thiourethane bond, ureide bond, imide bond and amide bond in a mol., and an **electrolyte** salt.
 IT 858181-45-0P, Styrene-2-hydroxyethyl acrylate-polyethylene glycol monomethacrylate methyl ether copolymer
 (polymer solid **electrolytes** for batteries)
 RN 858181-45-0 HCAPLUS
 CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with ethenylbenzene and α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

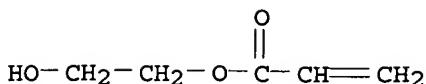
CM 1

CRN 26915-72-0
 CMF (C₂-H₄O)_n C₅ H₈ O₂
 CCI PMS



CM 2

CRN 818-61-1
 CMF C₅ H₈ O₃



CM 3

CRN 100-42-5
CMF C8 H8 $\text{H}_2\text{C}=\text{CH}-\text{Ph}$

IC ICM H01B001-06
 ICS C08K003-00; C08K005-00; C08L053-00; C08L055-00; H01M010-40
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 35
 ST polymer solid **electrolyte** battery
 IT Polymerization
 (formation of polymer solid **electrolytes** for batteries)
 IT Polymer **electrolytes**
 Secondary batteries
 (polymer solid **electrolytes** for batteries)
 IT 9081-45-2P, Styrene-methyl polyethylene glycol monomethacrylate
 copolymer 858181-45-0P, Styrene-2-hydroxyethyl
 acrylate-polyethylene glycol monomethacrylate methyl ether copolymer
 (polymer solid **electrolytes** for batteries)
 REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L92 ANSWER 2 OF 8 HCPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2005:323497 HCPLUS
 DOCUMENT NUMBER: 142:395064
 TITLE: Polymer solid **electrolytic** electric
 battery, electrode and those production methods
 INVENTOR(S): Kanamura, Kiyoshi; Kawamura, Kiyoshi; Shintani,
 Takeshi; Shimada, Mikiya; Aoyagi, Koichiro
 PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 40 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005100966	A	20050414	JP 2004-240036	20040819 <--
PRIORITY APPLN. INFO.:			JP 2003-295880	A 20030820 <--

ED Entered STN: 15 Apr 2005
 AB The disclosed battery contains polymer **electrolyte**
 comprising block copolymer having ethylene glycol derivative-acrylic acid
 derivative ester polymer block; and vinyl polymer block(s). The disclosed

electrodes for the battery contains electrode active substance, an electrolyte salt, and the block copolymer. Fabrication process for the battery is also disclosed. The polymer electrolyte has excellent thermal stability, phys. properties, and ion conductivity

IT 849950-63-6P

(polymer electrolytes for lithium batteries)

RN 849950-63-6 HCAPLUS

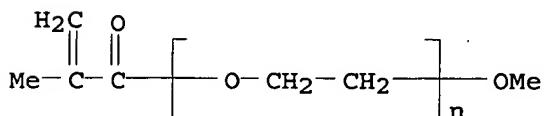
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with ethenylbenzene and α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl), pentablock (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0

CMF (C₂ H₄ O)_n C₅ H₈ O₂

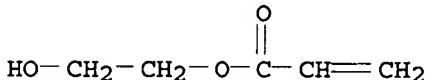
CCI PMS



CM 2

CRN 818-61-1

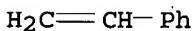
CMF C₅ H₈ O₃



CM 3

CRN 100-42-5

CMF C₈ H₈



IC ICM H01M010-40

ICS C08F293-00; H01B001-06; H01M004-02; H01M004-04; H01M004-60

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST block copolymer electrolyte lithium secondary battery

IT Battery cathodes

(block copolymer electrolytes for)

IT Polymer electrolytes

(block copolymers containing methoxypolyethylene glycol monomethacrylate polymer block as)

IT 7791-03-9, Lithium perchlorate

(electrolytes for lithium batteries)

IT 697284-07-4P 849950-63-6P

(polymer electrolytes for lithium batteries)

L92 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2005:260319 HCAPLUS
 DOCUMENT NUMBER: 142:339051
 TITLE: Composition for polymer solid electrolyte, polymer solid electrolyte, polymer solid electrolyte battery, ion-conductive membrane, copolymer and process for producing the copolymer
 INVENTOR(S): Muramoto, Hiroo; Niitani, Takeshi; Aoyagi, Koichiro
 PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 128 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005027144	A1	20050324	WO 2004-JP576	20040123
<--				
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2005089510	A	20050407	JP 2003-321155	20030912
<--				
EP 1667168	A1	20060607	EP 2004-704735	20040123
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1849674	A	20061018	CN 2004-80025920	20040123
<--				
US 20070040145	A1	20070222	US 2006-571998	20060309
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KR 779895	B1	20071128	KR 2006-706986	20060411
<--				
PRIORITY APPLN. INFO.:			JP 2003-321155	A 20030912
<--				
			WO 2004-JP576	W 20040123

ED Entered STN: 25 Mar 2005
 AB Polymer solid electrolytes excelling in thermal properties, phys. properties and ion conductivity and being close to practical level for use in batteries are disclosed. In particular, a composition for polymer solid electrolyte characterized in that the composition contains a copolymer and an electrolyte salt, the copolymer having repeating units of the formula: [CR1R2CR3CO2(CHR4aCHR4bO)mR5] (R1, R2, R3 = H, C1-C10 hydrocarbyl; R4a, R4b = H, Me, Me; R5 = H, hydrocarbyl, acyl, silyl; and m is an integer of 1 to 100) and

repeating units of the formula: CR₆R₇CR₈R₉ (R₆, R₇, R₈ = H, C₁-C₁₀ hydrocarbyl; R₉ = an organic group having at least one functional group selected from hydroxyl, carboxyl, epoxy, an acid anhydride group and amino).

IT 848442-03-5P 849950-63-6P 877834-07-6P
(polymer electrolyte compns. containing)

RN 848442-03-5 HCPLUS

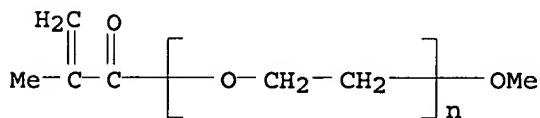
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with ethenylbenzene and α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl), triblock (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0

CMF (C₂ H₄ O)_n C₅ H₈ O₂

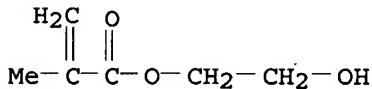
CCI PMS



CM 2

CRN 868-77-9

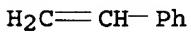
CMF C₆ H₁₀ O₃



CM 3

CRN 100-42-5

CMF C₈ H₈



RN 849950-63-6 HCPLUS

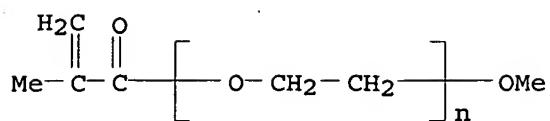
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with ethenylbenzene and α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl), pentablock (9CI) (CA INDEX NAME)

CM 1

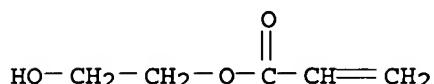
CRN 26915-72-0

CMF (C₂ H₄ O)_n C₅ H₈ O₂

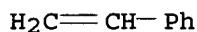
CCI PMS



CM 2

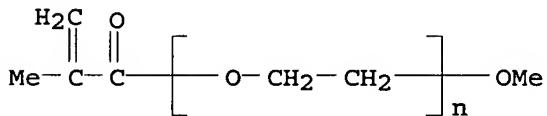
CRN 818-61-1
CMF C5 H8 O3

CM 3

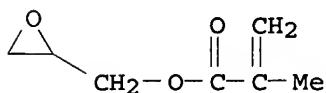
CRN 100-42-5
CMF C8 H8

RN 877834-07-6 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with
 ethenylbenzene and α -(2-methyl-1-oxo-2-propenyl)- ω -
 methoxypoly(oxy-1,2-ethanediyl), graft (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS

CM 2

CRN 106-91-2
CMF C7 H10 O3

CM 3

CRN 100-42-5
CMF C8 H8H2C=CH-Ph

IC ICM H01B001-06
 ICS C08L033-14; C08L053-00; C08F297-00; H01M006-18; H01M010-40;
 H01M004-60
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 35
 ST compn polymer solid **electrolyte** battery; ion conductive film
 polymer
 IT Polymer **electrolytes**
 (polyalkylene glycol acrylate block copolymers as)
 IT 19438-60-9, 4-Methylhexahydrophthalic anhydride 31305-94-9, YH-434
 (cross linking agent; polymer **electrolyte** compns. containing)
 IT 584-84-9, Tolylene 2,4-diisocyanate 7791-03-9, Lithium perchlorate
 (polymer **electrolyte** compns. containing)
 IT 697284-07-4P 848439-41-8DP, desilylated 848439-42-9DP, desilylated
 848439-43-0DP, deethylated 848439-44-1DP, debutylated
 848442-02-4DP, desilylated 848442-03-5P 849950-63-6P
 877834-07-6P 877837-29-1DP, desilylated
 (polymer **electrolyte** compns. containing)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L92 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:609449 HCAPLUS
 DOCUMENT NUMBER: 141:165708
 TITLE: Composition of polymer solid **electrolyte**
 INVENTOR(S): Muramoto, Hiroo; Shintani, Takeshi
 PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 45 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004213940	A	20040729	JP 2002-379656	20021227

PRIORITY APPLN. INFO.: JP 2002-379656 20021227
 <--

ED Entered STN: 30 Jul 2004
 AB The title material is a total solid **electrolyte** and is
 characterized by having excellent thermal, phys., and ion conductive
 property. The polymer has an average mol. weight of 5000-1,000,000 and could
 contain the following substitution groups: hydrocarbon, acyl, silyl,
 carboxyl, hydroxide, amino group, ester group, and epoxy group. The
 repeating units of the defined group take 1-95% of the total repeating
 units in the copolymer. The **electrolyte** can be used for
 manufacturing of elec. cell, capacitor, sensor, EC element, or
 electro-optical conversion element.

IT 64696-14-6P 728938-25-8P
 (composition of polymer solid electrolyte for manufacturing of
 electrochem. devices)

RN 64696-14-6 HCAPLUS

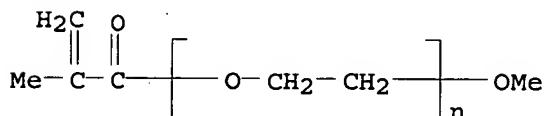
CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with
 ethenylbenzene and α -(2-methyl-1-oxo-2-propenyl)- ω -
 methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0

CMF (C₂ H₄ O)_n C₅ H₈ O₂

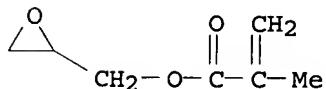
CCI PMS



CM 2

CRN 106-91-2

CMF C₇ H₁₀ O₃



CM 3

CRN 100-42-5

CMF C₈ H₈



RN 728938-25-8 HCAPLUS

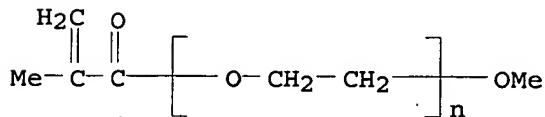
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with
 ethenylbenzene and α -(2-methyl-1-oxo-2-propenyl)- ω -
 methoxypoly(oxy-1,2-ethanediyl), block (9CI) (CA INDEX NAME)

CM 1

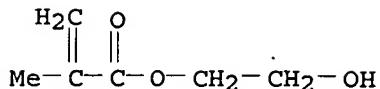
CRN 26915-72-0

CMF (C₂ H₄ O)_n C₅ H₈ O₂

CCI PMS



CM 2

CRN 868-77-9
CMF C6 H10 O3

CM 3

CRN 100-42-5
CMF C8 H8 $\text{H}_2\text{C} = \text{CH} - \text{Ph}$

IC ICM H01B001-06
 ICS C08F297-02; C08K003-00; C08K005-00; C08L033-14; C08L053-00;
 C08L057-00; H01M006-18; H01M010-40
 CC 76-2 (Electric Phenomena)
 Section cross-reference(s): 36
 ST compn polymer solid **electrolyte**
 IT Capacitors
 Sensors
 (composition of polymer solid **electrolyte** for manufacturing of
 electrochem. devices)
 IT Polymers, uses
 (composition of polymer solid **electrolyte** for manufacturing of
 electrochem. devices)
 IT Electric apparatus
 (electrochem.; composition of polymer solid **electrolyte** for
 manufacturing of electrochem. devices)
 IT Solid **electrolytes**
 (polymer; composition of polymer solid **electrolyte** for manufacturing
 of electrochem. devices)
 IT 64696-14-6P 728930-40-3P 728930-41-4P 728938-25-8P
 728938-30-5P 728938-31-6P
 (composition of polymer solid **electrolyte** for manufacturing of
 electrochem. devices)

L92 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2001:534443 HCAPLUS
 DOCUMENT NUMBER: 135:108131
 TITLE: Manufacture of water-soluble polymers with low
 residual monomer content
 INVENTOR(S): Iyanagi, Koichi
 PATENT ASSIGNEE(S): Pola Chemical Industries, Inc., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001200009	A	20010724	JP 2000-184152	20000620

PRIORITY APPLN. INFO.: JP 1999-321835 A 19991112
<--

ED Entered STN: 25 Jul 2001

AB Water-soluble polymers are manufactured by (co)polymerization of monomers containing

≥1 water-soluble monomers in a water- or water-miscible solvent-based buffer solution containing ionic or ion-forming polymerization initiators. Thus, NK Ester M 230G (methoxypolyethylene glycol methacrylate) 24.3, 2-hydroxyethyl methacrylate 18.0, Me methacrylate 12.0, and Viscoat 17F (1H,1H,2H,2H-heptadecafluorodecyl acrylate) 5.7 g were polymerized at 65° for 16 h in a com. buffer solution (pH 6.86) in the presence of ammonium persulfate to give a polymer with residual monomer content ≤50 ppm.

IT 350483-28-2P
(manufacture of water-soluble acrylic polymers with low residual monomer content)

RN 350483-28-2 HCPLUS

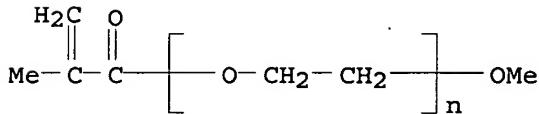
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl), graft (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0

CMF (C₂ H₄ O)_n C₅ H₈ O₂

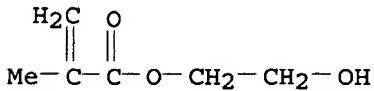
CCI PMS



CM 2

CRN 868-77-9

CMF C₆ H₁₀ O₃



CM 3

CRN 100-42-5

CMF C₈ H₈

H₂C=CH-Ph

IC ICM C08F004-40
 ICS C08F002-10; C08F012-08; C08F016-02; C08F020-06; C08F020-12;
 C08F020-22; C08F020-26; C08F026-10; C08F030-02
 CC 37-3 (Plastics Manufacture and Processing)
 IT 26710-97-4P, Acrylic acid-butyl acrylate-2-ethylhexyl acrylate
 copolymer 27340-63-2P 28262-63-7P, Butyl methacrylate-methacrylic
 acid-methyl methacrylate copolymer 59071-05-5P 87105-87-1P
 101944-39-2P, Hexyl methacrylate-methacrylic acid copolymer
 111740-55-7P, Methyl methacrylate-NK Ester M 230G graft copolymer
 145813-03-2P 170211-39-9P 287395-81-7P, 2-Hydroxyethyl
 methacrylate-NK Ester M 230G-Viscoat 3FM-Viscoat 17F graft copolymer
 287395-86-2P 287474-67-3P 287474-82-2P, Ethylene
 oxide-2-hydroxyethyl methacrylate-methyl methacrylate-Viscoat 17F
 graft copolymer methyl ether 350483-24-8P 350483-28-2P
 350483-29-3P 350483-30-6P 350483-31-7P 350483-32-8P
 350484-91-2P 350484-92-3P 350484-94-5P
 (manufacture of water-soluble acrylic polymers with low residual monomer
 content)

L92 ANSWER 6 OF 8 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:548252 HCPLUS

DOCUMENT NUMBER: 125:169694

ORIGINAL REFERENCE NO.: 125:31791a,31794a

TITLE: Thermoplastic resin compositions with improved
 adhesive and antistatic properties

INVENTOR(S): Sugiura, Motoyuki; Imaeda, Takashi; Yamada,
 Tsunehisa; Oomura, Hiroshi

PATENT ASSIGNEE(S): Nippon Oils & Fats Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08143780	A	19960604	JP 1994-290121	19941124

PRIORITY APPLN. INFO.:	JP 1994-290121	19941124
	<--	<--

ED Entered STN: 14 Sep 1996

AB Title compns. comprise (1) a thermoplastic resin as the major
 component, (2) a polyoxyalkylene containing ethylene oxide unit, and (3),
 to 100 parts of (1) + (2), \leq 50 parts of a polymer having
 segments made from poly(ethylene oxide)-containing monomers and segments
 made from other vinyl monomers. Styrene 700 g and Blemmer PME 4000
 (polyoxyethylene-containing methacrylate) 300 g were polymerized in an aqueous
 emulsion and then further polymerized with styrene 1000 g to give a block
 copolymer having polystyrene segments and polyoxyethylene group-containing
 segments and number-average mol. weight 160000. The block copolymer 5 parts
 was

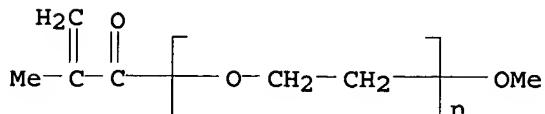
blended with a mixture containing 95 weight% of Noryl 534J 801 (polyphenylene
 ether) and 5 weight% of PEG 4000 (polyethylene oxide), extruded, and
 injection molded to give a test piece having bending strength 1100
 kg/cm² and surface intrinsic resistance 1.5 + 1011 Ω .

IT 178994-99-5P
 (thermoplastic resin compns. with improved adhesive and antistatic
 properties)

RN 178994-99-5 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with
 ethenylbenzene and α -(2-methyl-1-oxo-2-propenyl)- ω -
 methoxypoly(oxy-1,2-ethanediyl), block (9CI) (CA INDEX NAME)

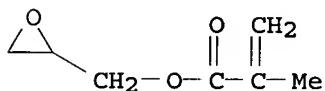
CM 1

CRN 26915-72-0
 CMF (C₂ H₄ O)_n C₅ H₈ O₂
 CCI PMS



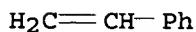
CM 2

CRN 106-91-2
 CMF C₇ H₁₀ O₃



CM 3

CRN 100-42-5
 CMF C₈ H₈



IC ICM C08L101-00
 ICS C08L023-00; C08L053-00; C08L057-00; C08L071-02
 CC 37-6 (Plastics Manufacture and Processing)
 IT 112119-04-7P 131431-51-1P 178994-98-4P 178994-99-5P
 (thermoplastic resin compns. with improved adhesive and antistatic properties)

L92 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1996:451704 HCAPLUS
 DOCUMENT NUMBER: 125:88273
 ORIGINAL REFERENCE NO.: 125:16653a
 TITLE: Antistatic thermoplastic resin compositions
 INVENTOR(S): Sugiura, Motoyuki; Imaeda, Takashi; Yamada,
 Tsunehisa; Oomura, Hiroshi
 PATENT ASSIGNEE(S): Nippon Oils & Fats Co Ltd, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08109305	A	19960430	JP 1994-248137	19941013

PRIORITY APPLN. INFO.:	JP 1994-248137	19941013
	<--	

ED Entered STN: 31 Jul 1996

AB The title compns., useful for automobiles, elec. devices, etc., comprise (A) thermoplastic resins as main components and contain (B) polymers composed of (a) poly(ethylene oxide) group-containing polymer segments obtained by copolymg. ≥ 1 poly(ethylene oxide) group (POE)-containing monomers and ≥ 1 vinyl monomers and (b) vinyl-type polymer segments free of POE, which are bonded chemical. Thus, 98 parts Noryl 534J801 [a poly(phenylene ether)] and 2 parts 300:700 Blemmer PME 4000-styrene block copolymer were dry blended, melt kneaded at 280°, pelletized, dried at 110°, and injection molded at 220, 260, and 300° to give test pieces.

IT 178994-99-5P
(antistatic thermoplastic resin compns. containing poly(ethylene oxide) copolymers)

RN 178994-99-5 HCPLUS

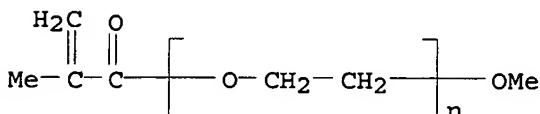
CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with ethenylbenzene and α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl), block (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0

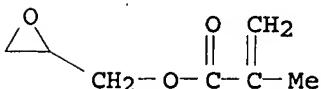
CMF (C₂ H₄ O)_n C₅ H₈ O₂

CCI PMS



CM 2

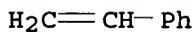
CRN 106-91-2

CMF C₇ H₁₀ O₃

CM 3

CRN 100-42-5

CMF C₈ H₈



IC ICM C08L051-06
 ICS C08L053-00; C08L101-00
 CC 37-6 (Plastics Manufacture and Processing)
 IT 112119-04-7P 115115-55-4P 131431-51-1P 178994-98-4P
 178994-99-5P
 (antistatic thermoplastic resin compns. containing poly(ethylene oxide) copolymers)

L92 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1977:602548 HCAPLUS
 DOCUMENT NUMBER: 87:202548
 ORIGINAL REFERENCE NO.: 87:32081a,32084a
 TITLE: Block copolymers as dispersion stabilizing agents
 INVENTOR(S): Sinclair, Richard G.; Berry, David L.; Cremeans, George E.; Markle, Richard A.; Germon, Wesley M., Jr.
 PATENT ASSIGNEE(S): Goodyear Tire and Rubber Co., USA
 SOURCE: Ger. Offen., 39 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2710248	A1	19770922	DE 1977-2710248 <--	19770309
CA 1098248	A1	19810324	CA 1977-272519 <--	19770223
AU 7722764	A	19780907	AU 1977-22764 <--	19770228
AU 507543	B2	19800221		
ZA 7701225	A	19780125	ZA 1977-1225 <--	19770301
GB 1544335	A	19790419	GB 1977-9205 <--	19770304
BR 7701358	A	19771018	BR 1977-1358 <--	19770307
JP 52109584	A	19770913	JP 1977-25855 <--	19770309
FR 2343754	A1	19771007	FR 1977-7183 <--	19770310
FR 2343754	B1	19800516		
US 4385164	A	19830524	US 1979-92595 <--	19791108.
PRIORITY APPLN. INFO.:			US 1976-665657 <--	A 19760310
			US 1978-895906 <--	A1 19780413

ED Entered STN: 12 May 1984
 AB Block copolymers containing hydrophilic and hydrophobic blocks were prepared and used as stabilizers for the aqueous dispersion polymerization of ethylenically unsatd. monomers. Thus, a mixture of 0.077 g AIBN and 93.9 mL of a solution prepared from 780 mL benzene and 195 g polyethylene glycol monomethyl ether monomethacrylate [26915-72-0] was added slowly

to a mixture of 1 mL glycidyl methacrylate, 200 mL benzene, 3.7 mL tert-butylstyrene, and 0.15 g AIBN, refluxed, cooled, treated with 0.347 g hydroquinone, 0.177 g triethylenediamine, and 0.63 mL methacrylic acid, and refluxed to prepare a block copolymer [64696-19-1] (number-average mol. weight 10,460) which was used as a stabilizer in the dispersion polymerization of vinyl acetate, acrylonitrile, Me methacrylate, butadiene, butadiene-styrene mixts., etc.

IT 64696-14-6
(block, dispersing agents, for polymns.)

RN 64696-14-6 HCAPLUS

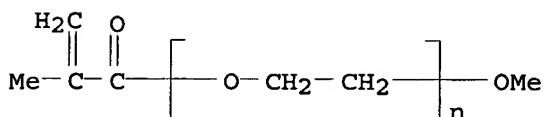
CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with ethenylbenzene and α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0

CMF (C₂ H₄ O)_n C₅ H₈ O₂

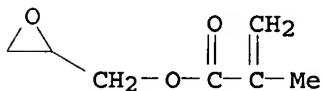
CCI PMS



CM 2

CRN 106-91-2

CMF C₇ H₁₀ O₃



CM 3

CRN 100-42-5

CMF C₈ H₈



IC C08F002-20

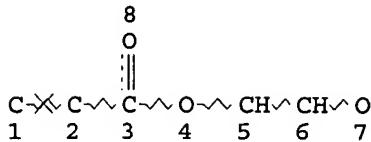
CC 36-3 (Plastics Manufacture and Processing)

IT 52857-07-5 64696-14-6 64696-15-7 64696-16-8 64696-18-0

64696-19-1

(block, dispersing agents, for polymns.)

=> d que 1109
 L7 SCR 2043
 L9 STR



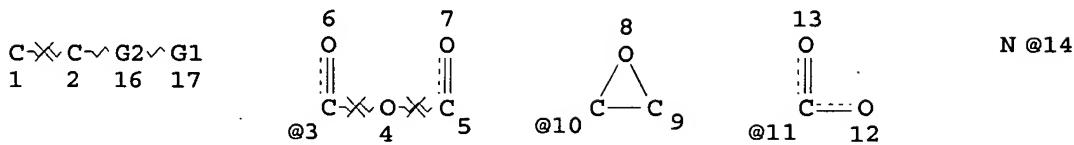
NODE ATTRIBUTES:

NSPEC IS RC AT 1
 NSPEC IS RC AT 2
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE
 L11 STR



VAR G1=3/10/11/14/OH

REP G2=(1-20) A

NODE ATTRIBUTES:

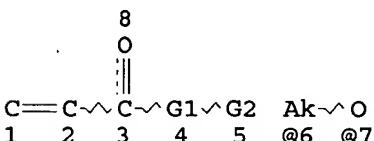
NSPEC IS RC AT 1
 NSPEC IS RC AT 2
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 NSPEC IS RC AT 4
 NSPEC IS RC AT 5
 NSPEC IS RC AT 14
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 8
 NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE

L15 136955 SEA FILE=REGISTRY SSS FUL L9 AND L11 AND L7
 L21 365051 SEA FILE=REGISTRY ABB=ON PLU=ON PACR/PCT
 L22 308947 SEA FILE=REGISTRY ABB=ON PLU=ON PETH/PCT
 L23 132698 SEA FILE=REGISTRY ABB=ON PLU=ON PSTY/PCT
 L29 STR



REP G1=(1-20) 7-3 6-5

VAR G2=OH/7

NODE ATTRIBUTES:

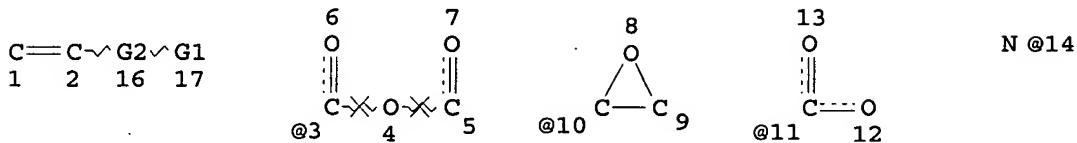
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L33 STR



VAR G1=3/10/11/14/OH

REP G2=(1-20) A

NODE ATTRIBUTES:

NSPEC	IS RC	AT	3
NSPEC	IS RC	AT	4
NSPEC	IS RC	AT	5
NSPEC	IS RC	AT	14
DEFAULT MLEVEL IS ATOM			
DEFAULT ECLEVEL IS LIMITED			

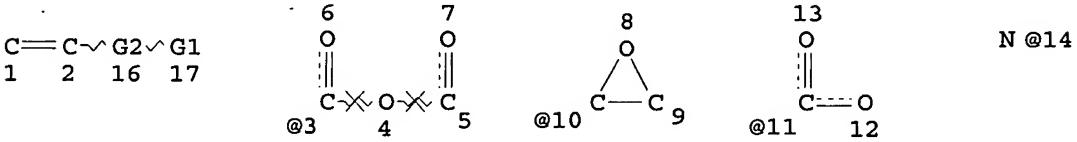
GRAPH ATTRIBUTES:

RSPEC 8

NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE

L35	109186	SEA FILE=REGISTRY	SUB=L15	SSS FUL (L29 AND L33)
L37	25925	SEA FILE=REGISTRY	ABB=ON	PLU=ON L35 AND L23
L38	25040	SEA FILE=REGISTRY	ABB=ON	PLU=ON L37 NOT P/ELS
L39	22884	SEA FILE=REGISTRY	ABB=ON	PLU=ON L38 NOT SI/ELS
L40	STR			



VAR G1=3/10/11/14/OH

VAR G2=AK/CY

NODE ATTRIBUTES:

NSPEC	IS RC	AT	3
NSPEC	IS RC	AT	4
NSPEC	IS RC	AT	5
NSPEC	IS RC	AT	14
DEFAULT MLEVEL IS ATOM			
DEFAULT ECLEVEL IS LIMITED			

GRAPH ATTRIBUTES:

RSPEC 8

NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE

L42 54341 SEA FILE=REGISTRY SUB=L35 SSS FUL L40
 L43 16281 SEA FILE=REGISTRY ABB=ON PLU=ON L42 AND L23
 L46 35853 SEA FILE=REGISTRY ABB=ON PLU=ON 868-77-9/CRN
 L47 20350 SEA FILE=REGISTRY ABB=ON PLU=ON 818-61-1/CRN
 L48 19565 SEA FILE=REGISTRY ABB=ON PLU=ON 106-91-2/CRN
 L49 15426 SEA FILE=REGISTRY ABB=ON PLU=ON L39 AND (L46 OR L47 OR
 L48)
 L50 4531 SEA FILE=REGISTRY ABB=ON PLU=ON 26915-72-0/CRN
 L51 80446 SEA FILE=REGISTRY ABB=ON PLU=ON 100-42-5/CRN
 L52 232 SEA FILE=REGISTRY ABB=ON PLU=ON L49 AND L50
 L53 159 SEA FILE=REGISTRY ABB=ON PLU=ON L51 AND L52
 L54 11 SEA FILE=REGISTRY ABB=ON PLU=ON L53 AND 3/NC
 L55 15 SEA FILE=HCAPLUS ABB=ON PLU=ON L54
 L56 99 SEA FILE=HCAPLUS ABB=ON PLU=ON L53
 L57 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L56 AND SOLID(2A) ELECTROLY
 T?
 L58 10276 SEA FILE=HCAPLUS ABB=ON PLU=ON L43
 L59 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L58 AND SOLID(2A) ELECTROLY
 T?
 L60 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L57 OR L59
 L61 232 SEA FILE=REGISTRY ABB=ON PLU=ON L49 AND L50
 L63 118 SEA FILE=HCAPLUS ABB=ON PLU=ON L61
 L64 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L63 AND SOLID(2A) ELECTROL
 YT?
 L65 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L60 OR L64
 L66 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L65 NOT L55
 L68 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L66 AND (1840-2003)/PRY,AY
 ,PY
 L72 14180 SEA FILE=REGISTRY ABB=ON PLU=ON L21 AND L22 AND L23
 L73 6163 SEA FILE=REGISTRY ABB=ON PLU=ON L72 AND L15
 L74 3225 SEA FILE=HCAPLUS ABB=ON PLU=ON L73
 L75 2484 SEA FILE=HCAPLUS ABB=ON PLU=ON L74 AND (1840-2003)/PRY,AY
 ,PY
 L76 12 SEA FILE=HCAPLUS ABB=ON PLU=ON L75 AND SOLID(2A) ELECTROLY
 T?
 L77 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L76 NOT L55
 L78 11 SEA FILE=HCAPLUS ABB=ON PLU=ON L68 OR L77
 L79 2255 SEA FILE=REGISTRY ABB=ON PLU=ON 25736-86-1/CRN
 L80 1190 SEA FILE=REGISTRY ABB=ON PLU=ON 32171-39-4/CRN
 L81 4 SEA FILE=REGISTRY ABB=ON PLU=ON 84180-83-6 /CRN
 L82 1 SEA FILE=REGISTRY ABB=ON PLU=ON 119202-21-0 /CRN
 L83 3114 SEA FILE=REGISTRY ABB=ON PLU=ON L15 AND (L79 OR L80 OR
 L81 OR L82)
 L84 663 SEA FILE=REGISTRY ABB=ON PLU=ON L83 AND (L46 OR L47 OR
 L48)
 L85 356 SEA FILE=HCAPLUS ABB=ON PLU=ON L84
 L86 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L85 AND SOLID(2A) ELECTROL
 YT?
 L87 16 SEA FILE=HCAPLUS ABB=ON PLU=ON L85 AND ELECTROLYT?
 L88 16 SEA FILE=HCAPLUS ABB=ON PLU=ON L86 OR L87
 L90 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L55 AND (1840-2003)/PRY,AY
 ,PY
 L91 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L90 AND ELECTROLYT?
 L92 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L90 OR L91
 L93 10316 SEA FILE=HCAPLUS ABB=ON PLU=ON L56 OR L58 OR L63
 L94 89 SEA FILE=HCAPLUS ABB=ON PLU=ON L93 AND ELECTROLYT?
 L95 71 SEA FILE=HCAPLUS ABB=ON PLU=ON L94 AND (1840-2003)/PRY,A
 Y,PY
 L96 67 SEA FILE=HCAPLUS ABB=ON PLU=ON L95 NOT L92
 L97 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L96 AND L65

L98	6 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L96 AND L76
L99	9 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L96 AND L78
L100	25 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L88 OR L97 OR L98 OR L99
 L101	25 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L100 NOT L92
L103	88 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L85 AND L93
L104	1 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L103 AND ELECTROLYT?
L105	16 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L88 OR L104
L106	83 SEA FILE=HCAPLUS ABB=ON	PLU=ON	(L96 OR L97 OR L98 OR L99 OR L100 OR L101)
L107	18 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L106 AND SOLID(3A) ELECTROL YT?
L108	25 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L105 OR L107
L109	16 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L108 AND (1840-2003)/PRY,A Y, PY

=> d 1109 1-16 ibib ed abs hitstr hitind

L109 ANSWER 1 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2005:522900 HCAPLUS
 DOCUMENT NUMBER: 143:62653
 TITLE: Secondary lithium polymer battery and its
manufacture
 INVENTOR(S): Maeda, Seiji; Saito, Takaichiro; Sakai, Tetsuo
 PATENT ASSIGNEE(S): Nippon Synthetic Chemical Industry Co., Ltd.,
Japan; National Institute of Advanced Industrial
Science & Technology
 SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005158703	A	20050616	JP 2004-292360	20041005 <--
PRIORITY APPLN. INFO.:			JP 2003-368706	A 20031029 <--

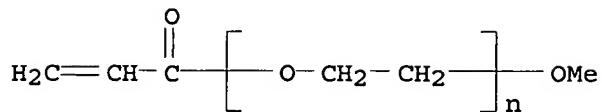
ED Entered STN: 17 Jun 2005
 AB The battery has a solid electrolyte, made of a
hardened film obtained from a Li+-conductive composition which contains a
hardenable oligomer, an unsatd. ethylene monomer, an
electrolyte salt, and a hydrophilic Si oxide, between an anode
and a cathode. The battery is manufactured by applying the composition on a
solvent-free Li foil anode; curing the composition to form the
electrolyte-anode stack; applying a cathode material on a
conductive metal to form a composite cathode; and bonding the cathode
on the electrolyte-anode stack.

IT 854623-52-2
(manufacture of secondary lithium batteries containing polymer
electrolytes)

RN 854623-52-2 HCAPLUS
 CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane,
4-methoxyphenol, methyloxirane, oxirane and
α-(1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl)
(9CI) (CA INDEX NAME)

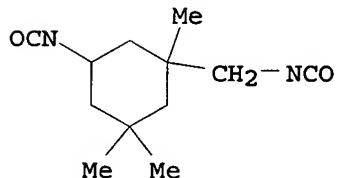
CM 1

CRN 32171-39-4
 CMF (C₂ H₄ O)_n C₄ H₆ O₂
 CCI PMS



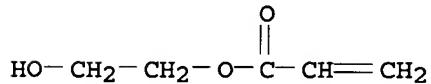
CM 2

CRN 4098-71-9
 CMF C₁₂ H₁₈ N₂ O₂



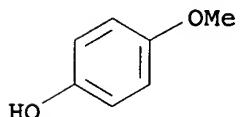
CM 3

CRN 818-61-1
 CMF C₅ H₈ O₃



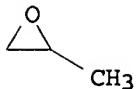
CM 4

CRN 150-76-5
 CMF C₇ H₈ O₂



CM 5

CRN 75-56-9
 CMF C₃ H₆ O



CM 6

CRN 75-21-8
CMF C2 H4 O

IC ICM H01M010-40
ICS C08F290-06; H01M004-02; H01M004-04
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST polymer electrolyte secondary lithium battery manuf
IT Secondary batteries
(lithium; manufacture of secondary lithium batteries containing polymer
electrolytes)
IT Battery electrolytes
(manufacture of secondary lithium batteries containing polymer
electrolytes)
IT 7631-86-9, Aerosil 200, uses
(colloidal; manufacture of secondary lithium batteries containing polymer
electrolytes)
IT 96-49-1, Ethylene carbonate 7429-90-5, Aluminum, uses 7439-93-2,
Lithium, uses 14283-07-9, Lithium tetrafluoroborate 90076-65-6
115401-75-7, Ethylene oxide-2-(2-methoxy ethoxy) ethyl glycidyl ether
copolymer 132085-38-2, Lithium manganese oxide (Li_{1.33}MnO₂)
854623-52-2 854623-52-2 854623-53-3 854623-54-4
(manufacture of secondary lithium batteries containing polymer
electrolytes)

L109 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:522899 HCAPLUS
DOCUMENT NUMBER: 143:62652
TITLE: Secondary lithium polymer battery and its
manufacture
INVENTOR(S): Maeda, Seiji; Saito, Takaichiro; Sakai, Tetsuo
PATENT ASSIGNEE(S): Nippon Synthetic Chemical Industry Co., Ltd.,
Japan; National Institute of Advanced Industrial
Science & Technology
SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2005158702	A	20050616	JP 2004-292359	20041005
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PRIORITY APPLN. INFO.:			JP 2003-368705	A 20031029

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ED Entered STN: 17 Jun 2005
 AB The battery has a solid electrolyte, made of a hardened film obtained from a Li⁺-conductive composition which contains a hardenable oligomer, an unsatd. ethylene monomer, an electrolyte salt, and a Si oxide having surface treated by ≥1 Si compound selected from a Si oil, a hexaalkyl disilazane, and an alkyl silane, between an anode and a cathode. The battery is manufactured by applying the composition on a solvent-free Li foil anode; curing

the composition to form the electrolyte-anode stack; applying a cathode material on a conductive metal to form a composite cathode; and bonding the cathode on the electrolyte-anode stack.

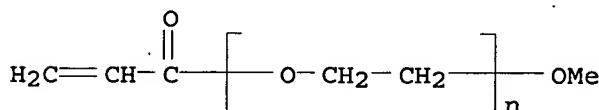
IT 854623-52-2
 (manufacture of secondary lithium batteries containing polymer electrolytes)

RN 854623-52-2 HCAPLUS

CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 4-methoxyphenol, methyloxirane, oxirane and α-(1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

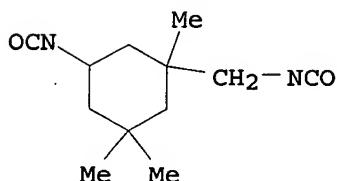
CM 1

CRN 32171-39-4
 CMF (C₂ H₄ O)_n C₄ H₆ O₂
 CCI PMS



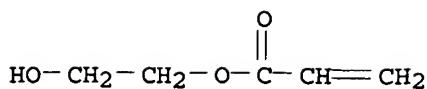
CM 2

CRN 4098-71-9
 CMF C₁₂ H₁₈ N₂ O₂

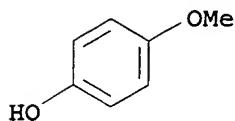


CM 3

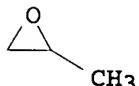
CRN 818-61-1
 CMF C₅ H₈ O₃



CM 4

CRN 150-76-5
CMF C7 H8 O2

CM 5

CRN 75-56-9
CMF C3 H6 O

CM 6

CRN 75-21-8
CMF C2 H4 O

IC ICM H01M010-40
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 ST polymer **electrolyte** secondary lithium battery manuf
 IT Secondary batteries
 (lithium; manufacture of secondary lithium batteries containing polymer
 electrolytes)
 IT **Battery electrolytes**
 (manufacture of secondary lithium batteries containing polymer
 electrolytes)
 IT 96-49-1, Ethylene carbonate 7429-90-5, Aluminum, uses 7439-93-2,
 Lithium, uses 7631-86-9, Aerosil NAX50, uses 14283-07-9, Lithium
 tetrafluoroborate 56275-01-5, Aerosil RX300 90076-65-6
 109944-58-3, Aerosil R 202 112153-70-5, Aerosil R 805 115401-75-7,
 Ethylene oxide-2-(2-methoxy ethoxy) ethyl glycidyl ether copolymer
 132085-38-2, Lithium manganese oxide (Li1.33MnO2) 854623-52-2
 854623-52-2 854623-53-3 854623-54-4
 (manufacture of secondary lithium batteries containing polymer
 electrolytes)

L109 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2005:344637 HCAPLUS
 DOCUMENT NUMBER: 142:414436
 TITLE: Polymer solid electrolyte
 INVENTOR(S): Matsuyama, Mutsuhiro; Watanabe, Takeshi
 PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005108460	A	20050421	JP 2003-336417 <--	20030926
PRIORITY APPLN. INFO.:			JP 2003-336417 <--	20030926

ED Entered STN: 21 Apr 2005

AB The title material has high Li ion conductivity near room temperature and is suited

for production of secondary battery. The polymer solid electrolyte contains a polymerable monomer made of a solid salt having polymerization functioning group, charged cation, and charged anion. The polymerization group contains C=C double bond. The electrolyte also contains alkali metal salt.

IT 850455-86-6P

(polymer solid electrolyte having high Li ion conductivity near room temperature for secondary battery)

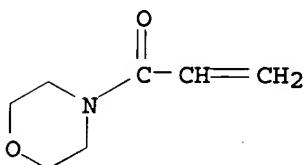
RN 850455-86-6 HCAPLUS

CN Pyrrolidinium, 1,1-bis[(4-ethenylphenyl)methyl]-, salt with 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide (1:1), polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate) and 4-(1-oxo-2-propenyl)morpholine (9CI) (CA INDEX NAME)

CM 1

CRN 5117-12-4

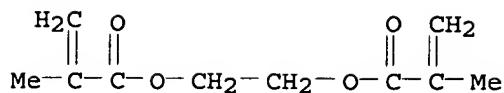
CMF C7 H11 N O2



CM 2

CRN 97-90-5

CMF C10 H14 O4

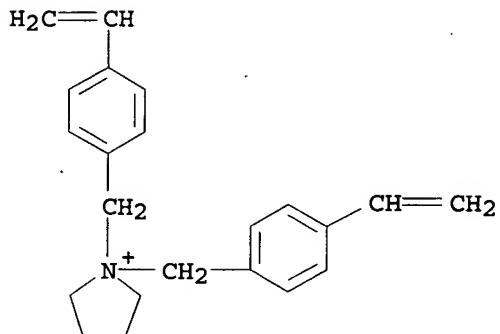


CM 3

CRN 850455-85-5
CMF C22 H26 N . C2 F6 N 04 S2

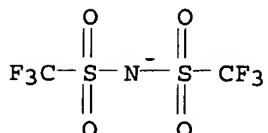
CM 4

CRN 850455-84-4
CMF C22 H26 N



CM 5

CRN 98837-98-0
CMF C2 F6 N 04 S2



IC ICM H01B001-06
IC S C08F012-26; C08K003-00; C08K005-00; C08L101-02; H01G009-038;
H01M010-40

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 36, 76

ST polymer solid electrolyte secondary battery

IT Electric conductivity
Secondary batteries

(polymer solid electrolyte having high Li ion conductivity near room temperature for secondary battery)

IT Alkali metal salts

(polymer solid electrolyte having high Li ion conductivity near room temperature for secondary battery)

IT Solid electrolytes

(polymer; polymer solid electrolyte having high Li ion conductivity near room temperature for secondary battery)
 IT 109-89-7, Diethylamine, reactions 123-75-1, Pyrrolidine, reactions 1592-20-7, P-Chloromethylstyrene 90076-65-6
 (polymer solid electrolyte having high Li ion conductivity near room temperature for secondary battery)
 IT 660-68-4P, Diethylammonium chloride 850455-82-2P 850455-85-5P
 850455-89-9P
 (polymer solid electrolyte having high Li ion conductivity near room temperature for secondary battery)
 IT 850455-83-3P 850455-86-6P 850455-88-8P
 (polymer solid electrolyte having high Li ion conductivity near room temperature for secondary battery)
 IT 94-36-0, Benzoyl peroxide, uses 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate 7439-93-2, Lithium, uses 21324-40-3, Lithium hexafluorophosphate
 (polymer solid electrolyte having high Li ion conductivity near room temperature for secondary battery)

L109 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:140264 HCAPLUS

DOCUMENT NUMBER: 142:243590

TITLE: Binder composition for secondary lithium battery electrode, the electrode, and the battery and its manufacture

INVENTOR(S): Saito, Takaichiro; Maeda, Seiji; Sakai, Tetsuo

PATENT ASSIGNEE(S): Nippon Synthetic Chemical Industry Co., Ltd., Japan; National Institute of Advanced Industrial Science and Technology

SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005044681	A	20050217	JP 2003-278731	20030724

PRIORITY APPLN. INFO.: JP 2003-278731 20030724
 <--

ED Entered STN: 18 Feb 2005

AB The composition comprises an urethane (meth)acrylate based compound having (meth)acryloyl group at the mol. end and/or a polyisocyanate derivative having ≥ 1 (meth)acryloyl group and residual hydrocarbon group at the mol. end and; and a photoinitiator and/or a thermo-initiator. The electrode has a cured coating film, comprising a composition which contains the above binder composition, an active mass, and a conductor, formed on a collector. The battery has a cathode or an anode uses the above electrode and a solid electrolyte layer, obtained by curing a resin composition which contains an electrolyte salt and the above binder composition, between the 2 electrodes; and is manufactured by applying the resin composition on the cathode

and/or the anode, curing the resin composition by active energy-beam radiation or heating to form the solid electrolyte layer, and heat pressing the cathode and the anode.

IT 444815-77-4 844635-55-8 844635-63-8
 844635-64-9

(structure and manufacture of secondary lithium batteries having polymer binder compns. in electrodes)

RN 444815-77-4 HCAPLUS

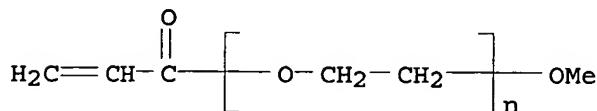
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, methyloxirane, oxirane and α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 32171-39-4

CMF (C₂ H₄ O)_n C₄ H₆ O₂

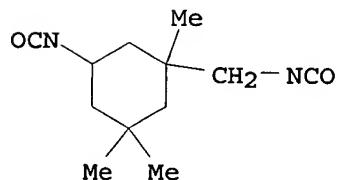
CCI PMS



CM 2

CRN 4098-71-9

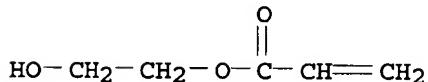
CMF C₁₂ H₁₈ N₂ O₂



CM 3

CRN 818-61-1

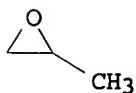
CMF C₅ H₈ O₃



CM 4

CRN 75-56-9

CMF C₃ H₆ O

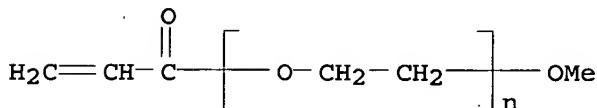


CM 5

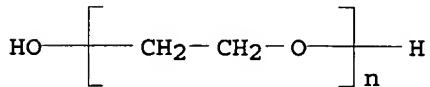
CRN 75-21-8
CMF C2 H4 O

RN 844635-55-8 HCPLUS
 CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with
 α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl),
 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and
 α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl)
 (9CI) (CA INDEX NAME)

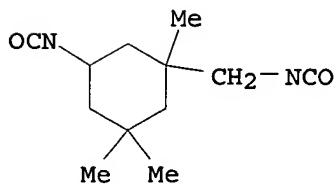
CM 1

CRN 32171-39-4
CMF (C2 H4 O)n C4 H6 O2
CCI PMS

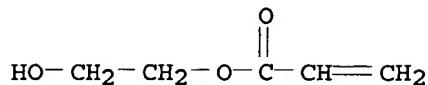
CM 2

CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS

CM 3

CRN 4098-71-9
CMF C12 H18 N2 O2

CM 4

CRN 818-61-1
CMF C5 H8 O3

RN 844635-63-8 HCPLUS

CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with
1,6-diisocyanatohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-
trimethylcyclohexane, methyloxirane, oxirane,
 α -(1-oxo-2-propenyl)- ω -hydroxypoly(oxy-1,2-ethanediyl) and
 α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl),
methyl ether (9CI) (CA INDEX NAME)

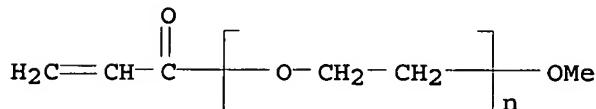
CM 1

CRN 67-56-1
CMF C H4 OH₃C-OH

CM 2

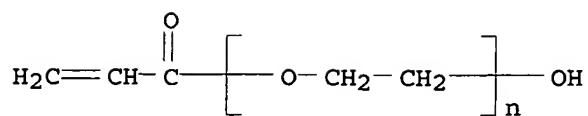
CRN 845733-81-5
CMF (C₁₂ H₁₈ N₂ O₂ . C₈ H₁₂ N₂ O₂ . C₅ H₈ O₃ . C₃ H₆ O . (C₂ H₄ O)_n
C₄ H₆ O₂ . (C₂ H₄ O)_n C₃ H₄ O₂ . C₂ H₄ O)_x
CCI PMS

CM 3

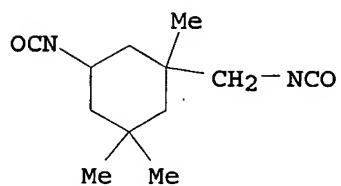
CRN 32171-39-4
CMF (C₂ H₄ O)_n C₄ H₆ O₂
CCI PMS

CM 4

CRN 26403-58-7
CMF (C₂ H₄ O)_n C₃ H₄ O₂
CCI PMS



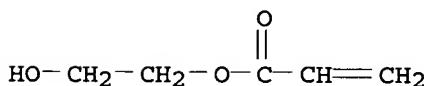
CM 5

CRN 4098-71-9
CMF C12 H18 N2 O2

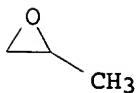
CM 6

CRN 822-06-0
CMF C8 H12 N2 O2OCN- (CH₂)₆- NCO

CM 7

CRN 818-61-1
CMF C5 H8 O3

CM 8

CRN 75-56-9
CMF C3 H6 O

CM 9

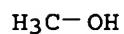
CRN 75-21-8
 CMF C₂ H₄ O



RN 844635-64-9 HCAPLUS
 CN Hexanoic acid, 2,6-diisocyanato-, 2-isocyanatoethyl ester, polymer with 2-hydroxyethyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, methyloxirane, oxirane, α -(1-oxo-2-propenyl)- ω -hydroxypoly(oxy-1,2-ethanediyl) and α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl), methyl ether (9CI) (CA INDEX NAME)

CM 1

CRN 67-56-1
 CMF C H₄ O

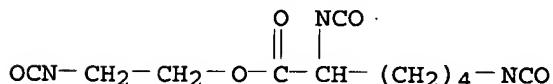


CM 2

CRN 845733-80-4
 CMF (C₁₂ H₁₈ N₂ O₂ . C₁₁ H₁₃ N₃ O₅ . C₅ H₈ O₃ . C₃ H₆ O . (C₂ H₄ O)_n C₄ H₆ O₂ . (C₂ H₄ O)_n C₃ H₄ O₂ . C₂ H₄ O)_x
 CCI PMS

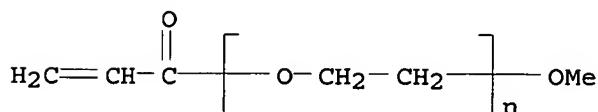
CM 3

CRN 69878-18-8
 CMF C₁₁ H₁₃ N₃ O₅



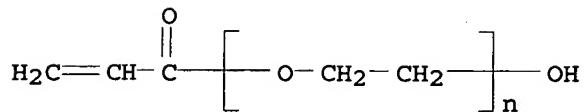
CM 4

CRN 32171-39-4
 CMF (C₂ H₄ O)_n C₄ H₆ O₂
 CCI PMS



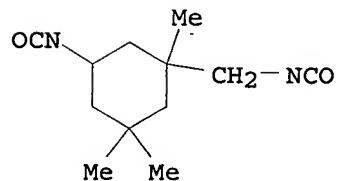
CM 5

CRN 26403-58-7
 CMF (C₂ H₄ O)_n C₃ H₄ O₂
 CCI PMS



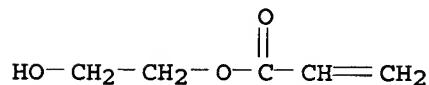
CM 6

CRN 4098-71-9
 CMF C₁₂ H₁₈ N₂ O₂



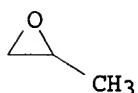
CM 7

CRN 818-61-1
 CMF C₅ H₈ O₃



CM 8

CRN 75-56-9
 CMF C₃ H₆ O



CM 9

CRN 75-21-8
 CMF C₂ H₄ O

O

IC ICM H01M004-62
 ICS H01M004-02; H01M010-40
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 ST electrode binder compn secondary lithium battery manuf solid
 electrolyte
 IT Battery electrodes
 Battery electrolytes
 Solid electrolytes
 (structure and manufacture of secondary lithium batteries having polymer
 binder compns. in electrodes)
 IT 7782-42-5, Graphite, uses 12798-95-7 90076-65-6 126941-24-0,
 Lithium manganese oxide (Li_{0.66}Mn₂O₄) 444815-77-4
 844635-55-8 844635-57-0 844635-60-5 844635-63-8
 844635-64-9
 (structure and manufacture of secondary lithium batteries having polymer
 binder compns. in electrodes)

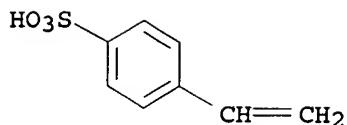
L109 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:823577 HCAPLUS
 DOCUMENT NUMBER: 141:334868
 TITLE: Polymer solid electrolyte
 INVENTOR(S): Matsuyama, Mutsuhiro; Watanabe, Takeshi
 PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004281147	A	20041007	JP 2003-68945 <--	20030313
PRIORITY APPLN. INFO.:			JP 2003-68945 <--	20030313

ED Entered STN: 08 Oct 2004
 AB The electrolyte, especially for a secondary battery, is obtained
 by solidifying a composition, which contains an anionic monomer and a
 cationic monomer as required components, by heat treating.
 IT 771584-09-9
 (compns. of polymer electrolytes containing anionic monomers
 and cationic monomers for secondary batteries)
 RN 771584-09-9 HCAPLUS
 CN 2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, salt with
 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide (1:1),
 polymer with N,N-dimethyl-2-propenamide, 1,2-ethanediyl
 bis(2-methyl-2-propenoate) and lithium 4-ethenylbenzenesulfonate (9CI)
 (CA INDEX NAME)

CM 1

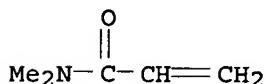
CRN 4551-88-6
 CMF C8 H8 O3 S . Li



● Li

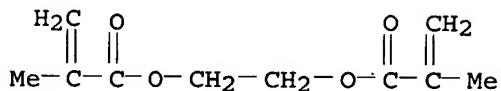
CM 2

CRN 2680-03-7
CMF C5 H9 N O



CM 3

CRN 97-90-5
CMF C10 H14 04

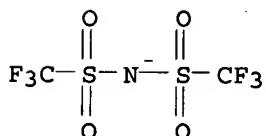


CM 4

CRN 618880-84-5
CMF C8 H16 N . C2 F6 N O4 S2

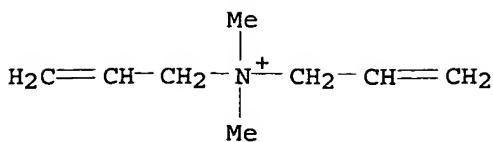
CM 5

CRN 98837-98-0
CMF C2 F6 N 04 S2



CM 6

CRN 48042-45-1
CMF C8 H16 N



IC ICM H01B001-06
 ICS C08F002-44; C08F212-14; C08L101-00; H01M010-40
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 ST secondary battery polymer **electrolyte** cationic monomer
 anionic monomer
 IT Battery **electrolytes**
 Solid **electrolytes**
 (comps. of polymer **electrolytes** containing anionic monomers
 and cationic monomers for secondary batteries)
 IT 21324-40-3, Lithium hexafluorophosphate 771584-09-9
 771584-12-4 771584-14-6 771584-17-9
 (comps. of polymer **electrolytes** containing anionic monomers
 and cationic monomers for secondary batteries)

L109 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:100619 HCAPLUS
 DOCUMENT NUMBER: 140:131173
 TITLE: **Electrolyte** compositions for batteries
 and capacitors
 INVENTOR(S): Nakamura, Michiei; Yoshikawa, Sachio; Takizawa,
 Minoru; Fujita, Toshiyasu; Doi, Seiji; Kihara,
 Nobuhiro
 PATENT ASSIGNEE(S): Dainichiseika Color & Chemicals Mfg. Co., Ltd.,
 Japan
 SOURCE: U.S. Pat. Appl. Publ., 18 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040023121	A1	20040205	US 2003-624671 <--	20030723
TW 283085	B	20070621	TW 2003-92119927 <--	20030722
JP 2004162019	A	20040610	JP 2003-200256 <--	20030723
JP 4164005	B2	20081008		
EP 1403948	A2	20040331	EP 2003-16544 <--	20030724

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
 KR 2004011381 A 20040205 KR 2003-52242 20030729
 <--
 CN 1490355 A 20040421 CN 2003-158868 20030730

PRIORITY APPLN. INFO.: JP 2002-221903 A 20020730
 <--
 ED Entered STN: 08 Feb 2004

AB Ion-conducting (co)polymer media and ion-conducting oligomer media

close in ion conductivity to organic-solvent-based electrolytes can be produced easily and safely on industrial scale. These ion-conducting (co)polymer media use (co)polymers containing at least one cyclocarbonato group, and these ion-conducting oligomer media employ oligomers containing at least two cyclocarbonato groups.

IT 64614-28-4DP, reaction products with carbon dioxide (electrolyte compns. for batteries and capacitors)

RN 64614-28-4 HCAPLUS

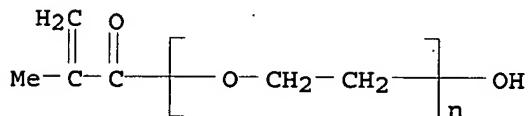
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with α -(2-methyl-1-oxo-2-propenyl)- ω -hydroxypoly(oxy-1,2-ethanediyl) and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 25736-86-1

CMF (C₂ H₄ O)_n C₄ H₆ O₂

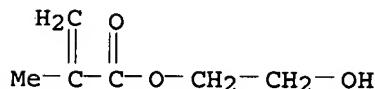
CCI PMS



CM 2

CRN 868-77-9

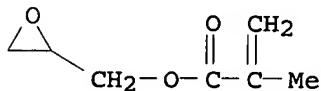
CMF C₆ H₁₀ O₃



CM 3

CRN 106-91-2

CMF C₇ H₁₀ O₃



IC ICM H01M010-40
ICS H01G009-025

INCL 429317000; 252062200; 429307000; 361525000; 525410000

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 37, 38, 76

ST battery electrolyte compn; capacitor electrolyte
compn

IT Capacitors

(double layer; electrolyte compns. for batteries and
capacitors)

IT Battery electrolytes
 (electrolyte compns. for batteries and capacitors)

IT Oligomers
 Polymers, uses
 Polyoxyalkylenes, uses
 (electrolyte compns. for batteries and capacitors)

IT Secondary batteries
 (lithium; electrolyte compns. for batteries and capacitors)

IT Textiles
 (nonwoven or woven, shape-retaining material; electrolyte compns. for batteries and capacitors)

IT Carboxylic acids, uses
 (polycarboxylic; electrolyte compns. for batteries and capacitors)

IT Epoxides
 (polyepoxides; electrolyte compns. for batteries and capacitors)

IT Alcohols, uses
 (polyhydric; electrolyte compns. for batteries and capacitors)

IT Phenols, uses
 (polymers; electrolyte compns. for batteries and capacitors)

IT Polyolefins
 (porous, shape-retaining material; electrolyte compns. for batteries and capacitors)

IT 96-48-0, γ -Butyrolactone 96-49-1, Ethylene carbonate 102-09-0, Diphenyl carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 429-07-2, Tetraethylammonium hexafluorophosphate 429-42-5, Tetrabutylammonium tetrafluoroborate 556-65-0, Lithium thiocyanate 616-38-6, Dimethyl carbonate 623-53-0, Methyl ethyl carbonate 872-36-6, Vinylene carbonate 2567-83-1, Tetraethylammonium perchlorate 7550-35-8, Lithium bromide 7791-03-9, Lithium perchlorate 10377-51-2, Lithium iodide 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 33454-82-9, Lithium triflate 90076-65-6, Lithium bis(trifluoromethanesulfonyl)imide (electrolyte compns. for batteries and capacitors)

IT 111601-55-9P (electrolyte compns. for batteries and capacitors)

IT 56-81-5DP, 1,2,3-Propanetriol, glycidyl derivs., polymers, reaction products with carbon dioxide 77-99-6DP, glycidyl derivs., polymers, reaction products with carbon dioxide 115-77-5DP, glycidyl derivs., polymers, reaction products with carbon dioxide 25067-05-4DP, reaction products with carbon dioxide 28472-86-8DP, reaction products with carbon dioxide 29734-45-0DP, reaction products with carbon dioxide 38811-11-9DP, reaction products with carbon dioxide 54847-49-3DP, reaction products with carbon dioxide 58782-18-6DP, reaction products with carbon dioxide 64614-28-4DP, reaction products with carbon dioxide 75503-85-4DP, reaction products with carbon dioxide 149797-02-4DP, reaction products with carbon dioxide (electrolyte compns. for batteries and capacitors)

L109 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:573561 HCAPLUS

DOCUMENT NUMBER: 137:143032

TITLE: Polymer solid electrolyte, electrochemical element using the electrolyte, and secondary battery

INVENTOR(S): Maeda, Seiji; Saito, Takaichiro
 PATENT ASSIGNEE(S): Nippon Synthetic Chemical Industry Co., Ltd.,
 Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002216845	A	20020802	JP 2001-10621 <--	20010118
PRIORITY APPLN. INFO.:			JP 2001-10621 <--	20010118

ED Entered STN: 02 Aug 2002

AB The electrolyte has an electrolyte salt in a polymer matrix, which is a crosslinked copolymer of a urethane (meth)acrylate and monomer $\text{CH}_2:\text{CRCO}[(\text{OCH}_2\text{CH}_2)_k(\text{OC}_3\text{H}_6)_l(\text{OCH}_2\text{CH}_2\text{CH}_2\text{CH}_2)_m]\text{OR}'$, where R = H or Me, R' = H, C1-18 (branched) alkyl group, k, l, and m = integers and $(k+l+m) \geq 1$. The electrochem. element and secondary Li battery use the electrolyte.

IT 444815-77-4 444815-79-6

(electrolytes containing urethane acrylate-oxyalkylene acrylate crosslinked copolymer matrixes for secondary lithium batteries)

RN 444815-77-4 HCAPLUS

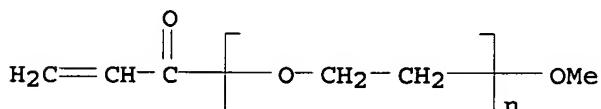
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, methyloxirane, oxirane and α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 32171-39-4

CMF (C₂ H₄ O)_n C₄ H₆ O₂

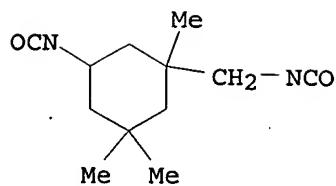
CCI PMS



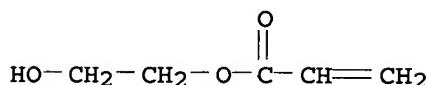
CM 2

CRN 4098-71-9

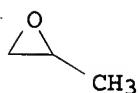
CMF C₁₂ H₁₈ N₂ O₂



CM 3

CRN 818-61-1
CMF C5 H8 O3

CM 4

CRN 75-56-9
CMF C3 H6 O

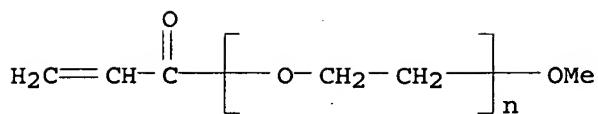
CM 5

CRN 75-21-8
CMF C2 H4 O

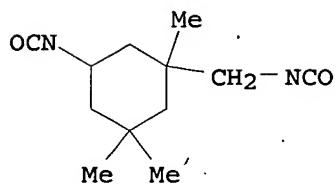
RN 444815-79-6 HCPLUS
 CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with
 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, oxirane,
 α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) and
 tetrahydrofuran (9CI) (CA INDEX NAME)

CM 1

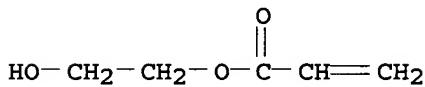
CRN 32171-39-4
CMF (C2 H4 O)n C4 H6 O2
CCI PMS



CM 2

CRN 4098-71-9
CMF C12 H18 N2 O2

CM 3

CRN 818-61-1
CMF C5 H8 O3

CM 4

CRN 109-99-9
CMF C4 H8 O

CM 5

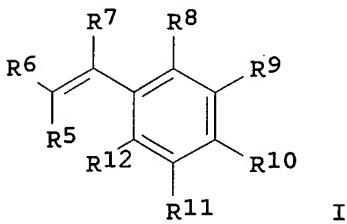
CRN 75-21-8
CMF C2 H4 OIC ICM H01M010-40
ICS C08F002-44; C08F002-50; C08F290-06; C08F299-02; C08K005-00;

C08L071-00; H01B001-06
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 ST secondary lithium battery **electrolyte** acrylate crosslinked
 copolymer; urethane polyoxyalkylene acrylate crosslinked copolymer
 battery **electrolyte**; electrochem element **electrolyte**
 acrylate crosslinked copolymer
 IT Battery **electrolytes**
 (electrolytes containing urethane acrylate-oxyalkylene
 acrylate crosslinked copolymer matrixes for secondary lithium
 batteries)
 IT 14283-07-9, Lithium fluoroborate 90076-65-6 444815-77-4
 444815-78-5 444815-79-6
 (electrolytes containing urethane acrylate-oxyalkylene
 acrylate crosslinked copolymer matrixes for secondary lithium
 batteries)

L109 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2001:479823 HCAPLUS
 DOCUMENT NUMBER: 135:83350
 TITLE: Hyperbranched polymers, their preparation,
 solid **electrolytes** therefrom,
 and electrochemical apparatus therewith
 INVENTOR(S): Sato, Masahiro; Tanba, Atsushi; Osawa, Toshiyuki;
 Oshima, Kentaro
 PATENT ASSIGNEE(S): Kansai Research Institute Inc., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001181352	A	20010703	JP 1999-371750	19991227
<--				
PRIORITY APPLN. INFO.:			JP 1999-371750	19991227
<--				

ED Entered STN: 03 Jul 2001
 GI



AB The polymers, showing high ion conductivity and solid strength, are prepared by polymerization of R1R2C:CR3CO₂(CH₂CH₂O)_nR4 (R1-3 = H, C1-4 alkyl; R4 = H, C1-4 alkyl, C1-4 acyl; n = 1-20 integer), I (R5-7 = H, C1-4 alkyl; R8-12 = H, halo, C1-4 (halo)alkyl, where ≥1 of them is C1-4 α-haloalkyl), and optional R13R14C:CR15CO₂(CH₂CH₂O)_mP(:O)(OH)₂ (R13-15 = H, C1-4 alkyl; m = 1-20 integer). The polymers may be crosslinked with acrylic and/or styrenic crosslinkers. The polymers

may be subjected to living radical polymerization offering dendritic graft polymers and may be cation exchanged with Li giving solid electrolytes for Li secondary batteries.

IT 347188-26-5DP, Li complexes 347188-27-6DP, Li complexes
(dendritic; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)

RN 347188-26-5 HCAPLUS

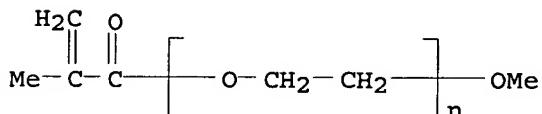
CN 2-Propenoic acid, 2-methyl-, 2-(phosphonoxy)ethyl ester, polymer with 1-(chloromethyl)-4-ethenylbenzene and α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0

CMF (C₂ H₄ O)_n C₅ H₈ O₂

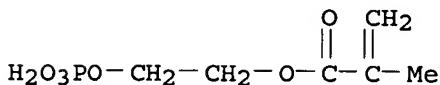
CCI PMS



CM 2

CRN 24599-21-1

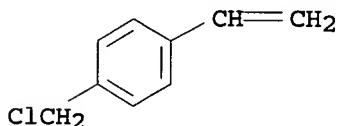
CMF C₆ H₁₁ O₆ P



CM 3

CRN 1592-20-7

CMF C₉ H₉ Cl



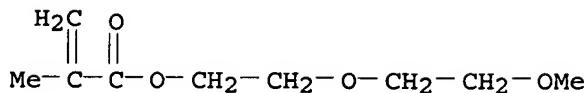
RN 347188-27-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(2-methoxyethoxy)ethyl ester, polymer with 1-(chloromethyl)-4-ethenylbenzene and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

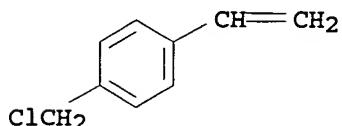
CRN 45103-58-0

CMF C9 H16 O4



CM 2

CRN 1592-20-7
CMF C9 H9 Cl



CM 3

CRN 107-13-1
CMF C3 H3 N

$$\text{H}_2\text{C}=\text{CH}-\text{C}\equiv\text{N}$$

IC ICM C08F220-28
ICS C08F004-10; C08F212-04; H01G009-028; H01M010-40
CC 72-3 (Electrochemistry)
Section cross-reference(s): 38, 52, 76
ST lithium battery **electrolyte** ion cond strength; dendritic polyethylene branching polymer battery **electrolyte**
IT Crosslinking agents
(acrylic and/or styrenic; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery **electrolytes**)
IT Polyoxalkylenes, uses
(acrylic, graft, dendritic, Li complexes; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery **electrolytes**)
IT Electric apparatus
(electrochem.; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery **electrolytes**)
IT Polymerization
(graft, living radical; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery **electrolytes**)
IT Dendritic polymers
(graft; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery **electrolytes**)
IT Secondary batteries
(lithium; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery **electrolytes**)
IT Polymerization
(living, radical, graft; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery **electrolytes**)

IT Battery electrolytes
 Solid electrolytes
 (polyethylene-branched hyperbranched graft polymers for
 high-ion-conductivity battery electrolytes)

IT 152253-76-4DP, Li complexes 347188-26-5DP, Li complexes
 347188-27-6DP, Li complexes
 (dendritic; polyethylene-branched hyperbranched graft polymers for
 high-ion-conductivity battery electrolytes)

IT 347188-28-7DP, Li complexes
 (graft; polyethylene-branched hyperbranched graft polymers for
 high-ion-conductivity battery electrolytes)

IT 553-26-4D, 4,4'-Bipyridyl, complexes with copper chloride
 7758-89-6D, Copper(I) chloride, bipyridyl complexes
 (living radical polymerization catalysts; polyethylene-branched
 hyperbranched graft polymers for high-ion-conductivity battery
 electrolytes)

IT 7439-93-2DP, Lithium, polyoxyethylene-branch-bearing dendritic polymer
 complexes, uses
 (polyethylene-branched hyperbranched graft polymers for
 high-ion-conductivity battery electrolytes)

L109 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:276179 HCAPLUS
 DOCUMENT NUMBER: 135:47163
 TITLE: Preparation, structure and electrochemical
 properties of Ppy/solid-state polymer
 electrolyte bilayer composites
 AUTHOR(S): Su, Jing; Fang, Bin; Wang, Geng-chao; Shi,
 Yu-zheng
 CORPORATE SOURCE: Institute of Material Science and Engineering,
 East China University of Science and Technology,
 Shanghai, 200237, Peop. Rep. China
 SOURCE: Gongneng Gaofenzi Xuebao (2001), 14(1),
 71-75
 CODEN: GGXUEH; ISSN: 1004-9843
 PUBLISHER: Gongneng Gaofenzi Xuebao Bianjibu
 DOCUMENT TYPE: Journal
 LANGUAGE: Chinese

ED Entered STN: 19 Apr 2001

AB Ppy/solid-state polymer electrolyte bilayer
 composites were prepared in situ by electrochem. polymerization of pyrrole in
 solid-state polymer electrolyte (PEO-LiClO₄). The
 interfacial structure of bilayer composites and electrochem.
 doping-undoping behavior were investigated using SEM, cyclic
 voltammetry and frequency response anal. resp. Ppy/solid
 -state polymer electrolyte bilayer composites possess the
 interpenetrating solid/solid interfacial structure and enhanced
 interfacial contact, and the electrochem. doping-undoping behavior of
 Ppy in solid state polymer electrolyte cells was
 enhanced owing to the enhanced interfacial contact.

IT 9065-70-7

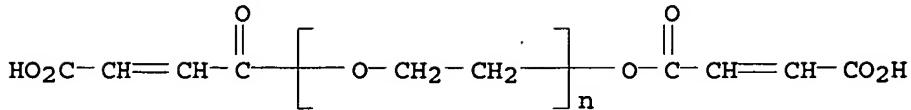
(preparation, structure and electrochem. properties of polypyrrole/
 solid-state polymer electrolyte bilayer
 composites)

RN 9065-70-7 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[(2Z)-3-carboxy-1-oxo-2-propenyl]-
 ω -[(2Z)-3-carboxy-1-oxo-2-propenyl]oxy-, polymer with
 ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 36247-43-5
 CMF (C₂ H₄ O)_n C₈ H₆ O₇
 CCI PMS



CM 2

CRN 100-42-5
 CMF C₈ H₈

H₂C=CH-Ph

CC 38-3 (Plastics Fabrication and Uses)
 ST polypyrrole solid state electrolyte bilayer composite
 IT Membranes, nonbiological
 (composite; preparation, structure and electrochem. properties of polypyrrole/solid-state polymer electrolyte bilayer composites)
 IT Electric impedance
 (preparation, structure and electrochem. properties of polypyrrole/solid-state polymer electrolyte bilayer composites)
 IT Polycarbonates, uses
 (preparation, structure and electrochem. properties of polypyrrole/solid-state polymer electrolyte bilayer composites)
 IT 7791-03-9, Lithium Perchlorate
 (preparation, structure and electrochem. properties of polypyrrole/solid-state polymer electrolyte bilayer composites)
 IT 9065-70-7 30604-81-0, Polypyrrole
 (preparation, structure and electrochem. properties of polypyrrole/solid-state polymer electrolyte bilayer composites)

L109 ANSWER 10 OF 16 HCPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2000:723506 HCPLUS
 DOCUMENT NUMBER: 133:297365
 TITLE: Preparation of crosslinkable-type polymeric solid electrolytes with good film strength and high ionic conductivity for high-temperature-operation-type large secondary battery
 INVENTOR(S): Hirahara, Kazuhiro; Nakanishi, Itaru
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000285751	A	20001013	JP 2000-14708	20000124

PRIORITY APPLN. INFO.:	JP 1999-21406	A 19990129
	<--	

ED Entered STN: 13 Oct 2000

AB The crosslinked polymeric solid electrolyte is prepared by mixing a self-crosslinkable block graft copolymer consisting of (A) $-\text{CH}_2\text{C}[\text{p-C}_6\text{H}_4\text{O}(\text{CH}_2\text{CH}(\text{R}2)\text{O})\text{nR}3]\text{R}1-$ blocks [$\text{R}1 = \text{H, Me, Et; R}2 = \text{H, Me; R}3 = \text{alkyl, aryl, acyl, silyl, cyanoalkyl; n = 1-100; mol. weight of graft chains } (\text{CH}_2\text{CH}(\text{R}2)\text{O})\text{nR}3 = 45-4400]$, (B) $-\text{CH}_2\text{C}[\text{p-C}_6\text{H}_4(\text{CH}_2)\text{yCH:CH}_2]\text{R}4-$ blocks ($\text{R}4 = \text{H, Me, Et; y = 2, 3}$), and/or (C) $-\{\text{CH}_2\text{C}(\text{R}4)[\text{p-C}_6\text{H}_4(\text{CH}_2)\text{yCH:CH}_2]\}_m[\text{CH}_2\text{C}(\text{Ph})\text{R}5]\text{k-}$ ($\text{R}4, \text{R}5 = \text{H, Me, ethyl; y = 2,3; k} \geq 200; k/m = 95:5-50/50$) with a reactive polyalkylene oxide $\text{H}_2\text{C:C}(\text{R}6)\text{COO}(\text{R}9)\text{eX}(\text{CH}_2\text{CH}(\text{R}7)\text{O})\text{fR}8$ ($\text{R}6, \text{R}7 = \text{H methyl; R}8 = \text{H}_2\text{O:CHCO-, H}_2\text{C:C}(\text{CH}_3)\text{CO-, vinyl, allyl, epoxide, C} \leq 25\text{alkyl, (un)substituted Ph; R}9 = \text{ethylene oxide, tetramethylene oxide; e + f = 0-25; X = -PhC}(\text{CH}_3)\text{2PhO-}$), and a lithium inorg. salt, and crosslinking the self-crosslinkable block graft copolymer with reactive polyalkylene oxide. Thus, 5.0 parts poly[butenyl styrene-b-(p-hydroxystyrene-g-ethylene oxide)-b-butenyl styrene] was mixed with methoxypolyethylene glycol monomethacrylate 2.0, polyethylene glycol diacrylate 1.0 and LiClO_4 0.5 parts, was cast onto a plate, irradiated with 10 Mrad electron beam, and vacuum-dried at 100° for 20 h, to give a film showing storage elastic modulus $9.5 \times 10^6 \text{ Pa}$ at 30° and $\geq 8.4 \times 10^6 \text{ Pa}$ at 80° .

IT 301345-08-4P

(preparation of polymeric solid electrolytes by crosslinking styrene-based block graft copolymers with reactive polyalkylene oxides)

RN 301345-08-4 HCPLUS

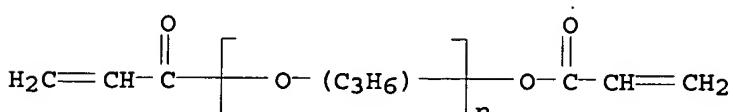
CN Phenol, 4-ethenyl-, polymer with 1-(3-butenyl)-4-ethenylbenzene, ethenylbenzene, methyloxirane polymer with oxirane mono(2-methyl-2-propenoate) octyl ether, oxirane, oxirane polymer with tetrahydrofuran 2-methyl-2-propenoate and α -(1-oxo-2-propenyl)- ω -[(1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 52496-08-9

CMF (C₃ H₆ O)_n C₆ H₆ O₃

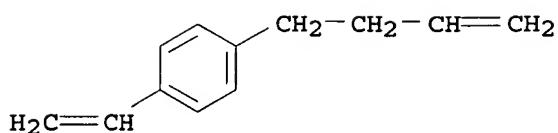
CCI IDS, PMS



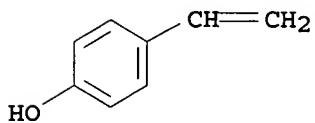
CM 2

CRN 5676-28-8

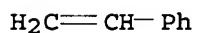
CMF C12 H14



CM 3

CRN 2628-17-3
CMF C8 H8 O

CM 4

CRN 100-42-5
CMF C8 H8

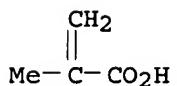
CM 5

CRN 75-21-8
CMF C2 H4 O

CM 6

CRN 125387-10-2
CMF (C4 H8 O . C2 H4 O)x . x C4 H6 O2

CM 7

CRN 79-41-4
CMF C4 H6 O2

CM 8

CRN 27637-03-2
 CMF (C4 H8 O . C2 H4 O)x
 CCI PMS

CM 9

CRN 109-99-9
 CMF C4 H8 O



CM 10

CRN 75-21-8
 CMF C2 H4 O



CM 11

CRN 123939-68-4
 CMF C8 H18 O . C4 H6 O2 . (C3 H6 O . C2 H4 O)x

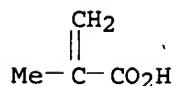
CM 12

CRN 111-87-5
 CMF C8 H18 O

HO—(CH₂)₇—Me

CM 13

CRN 79-41-4
 CMF C4 H6 O2

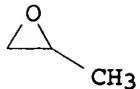


CM 14

CRN 9003-11-6
 CMF (C₃ H₆ O . C₂ H₄ O)x
 CCI PMS

CM 15

CRN 75-56-9
 CMF C₃ H₆ O



CM 16

CRN 75-21-8
 CMF C₂ H₄ O



IC ICM H01B013-00
 ICS C08F002-44; C08F290-12; C08F299-00; C08J003-24; C08L055-00;
 H01G009-028; H01M006-18; H01M010-40; H01B001-06
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 37, 52
 ST styrene polyoxyalkylene graft block solid
 electrolyte; butenyl styrene polyoxyalkylene electron beam
 crosslinking; secondary battery polymeric solid
 electrolyte
 IT Polyoxyalkylenes, uses
 (crosslinked; preparation of polymeric solid
 electrolytes by crosslinking styrene-based block graft
 copolymers with reactive polyalkylene oxides)
 IT Battery electrolytes
 Ionic conductors
 Solid electrolytes
 (preparation of polymeric solid electrolytes by
 crosslinking styrene-based block graft copolymers with reactive
 polyalkylene oxides)
 IT 301345-00-6P, p-(3-Butenyl)styrene-ethylene
 oxide-p-hydroxystyrene-methoxypolyethylene glycol
 monomethacrylate-polyethylene glycol diacrylate copolymer
 301345-01-7P, p-(3-Butenyl)styrene-ethylene
 oxide-p-hydroxystyrene-methoxypolyethylene glycol
 monoacrylate-polypropylene glycol dimethacrylate copolymer
 301345-02-8P 301345-03-9P 301345-04-0P 301345-08-4P
 (preparation of polymeric solid electrolytes by
 crosslinking styrene-based block graft copolymers with reactive
 polyalkylene oxides)
 IT 7791-03-9, Lithium perchlorate 14283-07-9, Lithium tetrafluoroborate
 21324-40-3, Lithium hexafluorophosphate 29935-35-1, Lithium
 hexafluoroarsenate 33454-82-9, Lithium trifluoromethanesulfonate
 (preparation of polymeric solid electrolytes by
 crosslinking styrene-based block graft copolymers with reactive

polyalkylene oxides)

L109 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2000:715631 HCAPLUS
 DOCUMENT NUMBER: 133:297308
 TITLE: Manufacture of crosslinked solid polymer
 electrolytes having excellent moldability,
 film strength, and high ion conductivity
 INVENTOR(S): Hirahara, Kazuhiro; Nakanishi, Toru
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000281737	A	20001010	JP 2000-14703 <--	20000124
US 6322924	B1	20011127	US 2000-493278 <--	20000128
PRIORITY APPLN. INFO.:			JP 1999-21405 <--	A 19990129

ED Entered STN: 11 Oct 2000
 AB The polymers are manufactured by crosslinking a mixture of reactive polyalkylene oxides $H_2C:CR_5CO_2R_8kX(CH_2CHR_6O)_mR_7$ ($R_5, R_6 = H, Me; R_7 = H_2C:CHCO, H_2C:CMeCO$, vinyl, etc.; $R_8 =$ oxyethylene, oxytetramethylene; $k, m = 0-25$; $k = m \neq 0$; $X = C_6H_4CMe_2C_6H_4O$, single bond), inorg. Li salts, and block-graft copolymers having units of $CH_2CR_1[C_6H_4-p-O(CH_2CHR_2O)_nR_3]$ ($R_1 = H, Me, Et; R_2 = H, Me; R_3 =$ alkyl, aryl, acyl, silyl, cyanoalkyl; $n = 1-100$, number-average mol. weight of graft chain 45-4400), CH_2CR_4M [$R_4 = H, Me, Et; M = CH:CH_2, CMe:CH_2, CO_2Me, CO_2Et$, (un)substituted Ph] and/or $CH_2CR_9(C_6H_4-p-SiR_{10}R_{11}R_{12})$ ($R_{10}-R_{12} = Me, Et; R_9 = H, Me, Et$). Thus, a composition containing poly[styrene-b-(p-hydroxystyrene-g-ethylene oxide)-b-styrene] 5.0, polyethylene glycol monomethacrylate Me ether 2.0, polyethylene glycol diacrylate 1.0, and $LiClO_4$ 0.5 g was applied on a petri, and irradiated by electron beam to give a film showing storage elastic modulus at 80° $4.3 + 10^6$ Pa and ion conductivity at 80° $0.8 + 10^{-3}$ S/cm.

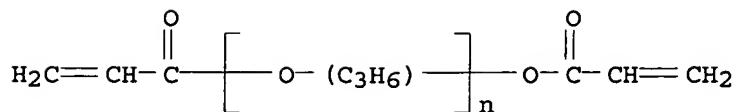
IT 300766-09-0P
 (manufacture of crosslinked solid polymeric electrolytes having good moldability, film strength, and high ion conductivity)

RN 300766-09-0 HCAPLUS

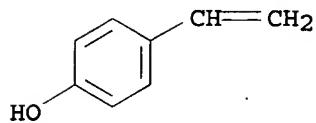
CN Phenol, 4-ethenyl-, polymer with ethenylbenzene, methyloxirane polymer with oxirane bis(2-methyl-2-propenoate), methyloxirane polymer with oxirane mono(2-methyl-2-propenoate) octyl ether, oxirane and α -(1-oxo-2-propenyl)- ω -[(1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

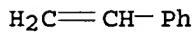
CRN 52496-08-9
 CMF (C₃ H₆ O)_n C₆ H₆ O₃
 CCI IDS, PMS



CM 2

CRN 2628-17-3
CMF C8 H8 O

CM 3

CRN 100-42-5
CMF C8 H8

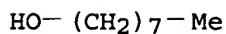
CM 4

CRN 75-21-8
CMF C2 H4 O

CM 5

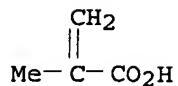
CRN 123939-68-4
CMF C8 H18 O . C4 H6 O2 . (C3 H6 O . C2 H4 O)x

CM 6

CRN 111-87-5
CMF C8 H18 O

CM 7

CRN 79-41-4
CMF C4 H6 O2

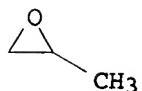


CM 8

CRN 9003-11-6
 CMF (C₃ H₆ O . C₂ H₄ O)x
 CCI PMS

CM 9

CRN 75-56-9
 CMF C₃ H₆ O



CM 10

CRN 75-21-8
 CMF C₂ H₄ O

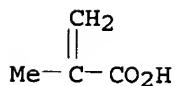


CM 11

CRN 87003-89-2
 CMF C₄ H₆ O₂ . 1/2 (C₃ H₆ O . C₂ H₄ O)x

CM 12

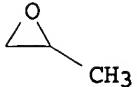
CRN 79-41-4
 CMF C₄ H₆ O₂



CM 13

CRN 9003-11-6
 CMF (C₃ H₆ O . C₂ H₄ O)x
 CCI PMS

CM 14

CRN 75-56-9
CMF C3 H6 O

CM 15

CRN 75-21-8
CMF C2 H4 O

IC ICM C08F299-02
ICS C08F293-00; C08J003-24; H01B013-00; H01M006-18; H01M010-40;
H01B001-06

CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 52

ST crosslinkable solid polymer **electrolyte** manuf;
secondary battery solid polymer **electrolyte**;
styrene ethylene oxide graft polymer; lithium alkylene oxide polymer
complex

IT Secondary batteries
Solid electrolytes
 (manufacture of crosslinked solid polymeric
 electrolytes having good moldability, film strength, and
 high ion conductivity)

IT 300720-07-4P, Ethylene oxide-p-hydroxystyrene-methoxy polyethylene
 glycol monomethacrylate-polyethylene glycol diacrylate-styrene
 copolymer 300720-08-5P, Ethylene oxide-p-hydroxystyrene-polyethylene
 glycol monoacrylate methyl ether-polypropylene glycol
 dimethacrylate-styrene copolymer 300720-09-6P, Ethylene
 oxide-p-hydroxystyrene-polyethylene glycol monomethacrylate allyl
 ether-polyethylene glycol monomethacrylate methyl ether-styrene
 copolymer 300720-10-9P, Ethylene
 oxide-p-hydroxystyrene-polypropylene glycol diacrylate-polyethylene
 glycol monoacrylate lauryl ether-styrene copolymer 300720-11-0P,
 Ethylene oxide-p-hydroxystyrene-polyethylene glycol monoacrylate allyl
 ether-polyethylene glycol monoacrylate methyl
 ether-p-trimethylsilylstyrene copolymer 300766-09-0P
 (manufacture of crosslinked solid polymeric
 electrolytes having good moldability, film strength, and
 high ion conductivity)

IT 7791-03-9, Lithium perchlorate 14283-07-9, Lithium tetrafluoroborate
 21324-40-3, Lithium hexafluorophosphate 29935-35-1, Lithium
 hexafluoroarsenate 33454-82-9, Lithium trifluoromethanesulfonate
 (manufacture of crosslinked solid polymeric
 electrolytes having good moldability, film strength, and
 high ion conductivity)

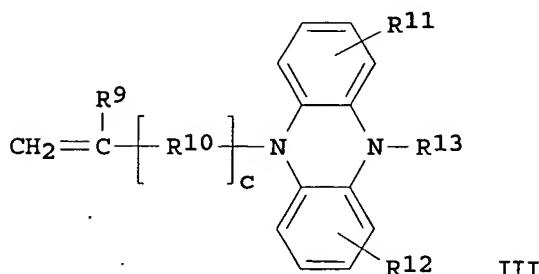
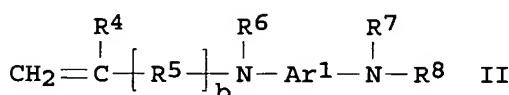
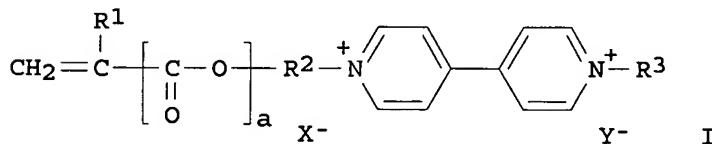
IT 131175-12-7, Ethylene oxide-p-hydroxystyrene-styrene block graft
 copolymer

(manufacture of crosslinked solid polymeric electrolytes having good moldability, film strength, and high ion conductivity)

L109 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2000:277719 HCAPLUS
 DOCUMENT NUMBER: 132:315620
 TITLE: Electrochromic device
 INVENTOR(S): Nishikitani, Yoshinori; Sugiura, Izuru; Kobayashi, Masaaki; Imafuku, Hiroshi
 PATENT ASSIGNEE(S): Nippon Mitsubishi Oil Corporation, Japan
 SOURCE: Eur. Pat. Appl., 40 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 995786	A1	20000426	EP 1999-850155	19991020
EP 995786	B1	20030108		<--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2000131722	A	20000512	JP 1998-300764	19981022
US 6208452	B1	20010327	US 1999-425330	19991022
<--				
PRIORITY APPLN. INFO.:				JP 1998-300764 A 19981022
<--				

ED Entered STN: 28 Apr 2000
 GI



AB Electrochromic devices are described which comprise an ion conductive layer obtained by curing a composition comprising a bipyridinium compound described by the general formula I (X- and Y- = anions independently selected from halo anion, ClO₄⁻, BF₄⁻, PF₆⁻, CH₃COO⁻ and CH₃(C₆H₄)SO₃⁻; R₁ = H or C₁-5 alkyl; R₂ = C₁-30 divalent hydrocarbon or oxygen-containing hydrocarbon; R₃ = C₁-20 hydrocarbon or oxygen-containing hydrocarbon group; and a = 0 or 1); an amine compound described by the general formulas II and/or III (R₄ = H or C₁-5 alkyl; R₅ = C₁-15 hydrocarbon or oxygen-containing hydrocarbon; b = 0 or 1; R₆ and R₇ = the same or different and = each H or C₁-20 hydrocarbon or oxygen-containing hydrocarbon; R₈ = H or C₁-20 hydrocarbon or oxygen-containing hydrocarbon; Ar₁ = C₆-20 divalent aromatic hydrocarbon; R₉ = H or C₁-5 alkyl; R₁₀ = C₁-15 hydrocarbon or oxygen-containing hydrocarbon; c = 0 or 1; R₁₁ and R₁₂ = independently selected H or C₁-20 hydrocarbon or oxygen-containing hydrocarbon; and R₁₃ = H or C₁-20 hydrocarbon or oxygen-containing hydrocarbon group); and a precursor component of a polymeric solid electrolyte, disposed between two elec. conductive substrates at least one of which is transparent. The ion conductive layer may addnl. incorporate an UV-absorbing compound having an ethylenic double bond.

IT 265648-12-2 265648-15-5 265648-17-7

(electrochromic devices with cured ion conductive layers)

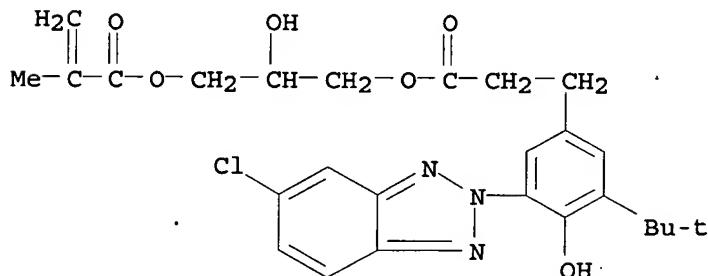
RN 265648-12-2 HCAPLUS

CN 4,4'-Bipyridinium, 1-[(ethenylphenyl)methyl]-1'-(phenylmethyl)-, dichloride, polymer with N-[4-(diphenylamino)phenyl]-2-methyl-2-propenamide, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl 3-(5-chloro-2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxybenzenepropanoate, α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) and α -(2-methyl-1-oxo-2-propenyl)- ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 253588-79-3

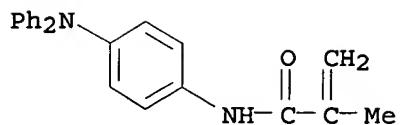
CMF C26 H30 Cl N3 O6



CM 2

CRN 163684-75-1

CMF C22 H20 N2 O



CM 3

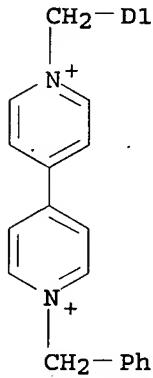
CRN 71036-55-0
 CMF C26 H24 N2 . 2 Cl
 CCI IDS

PAGE 1-A



D1-CH=CH2

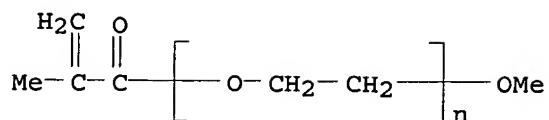
PAGE 2-A



●2 Cl-

CM 4

CRN 26915-72-0
 CMF (C2 H4 O)n C5 H8 O2
 CCI PMS

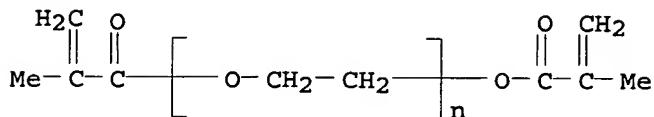


CM 5

CRN 25852-47-5

CMF (C₂ H₄ O)_n C₈ H₁₀ O₃

CCI PMS

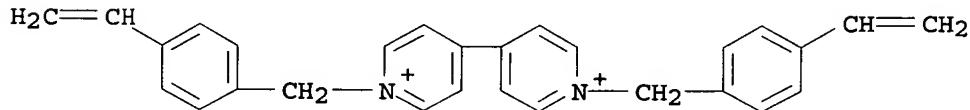


RN 265648-15-5 HCAPLUS

CN 4,4'-Bipyridinium, 1,1'-bis[(4-ethenylphenyl)methyl]-, dichloride, polymer with N-[4-(diphenylamino)phenyl]-2-methyl-2-propenamide, 1-[(ethenylphenyl)methyl]-1'-(phenylmethyl)-4,4'-bipyridinium dichloride, α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) and α -(2-methyl-1-oxo-2-propenyl)- ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

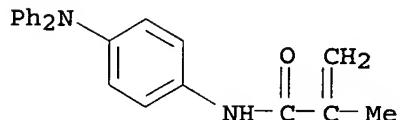
CM 1

CRN 232599-55-2

CMF C₂₈ H₂₆ N₂ . 2 Cl●2 Cl⁻

CM 2

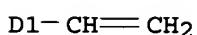
CRN 163684-75-1

CMF C₂₂ H₂₀ N₂ O

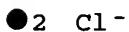
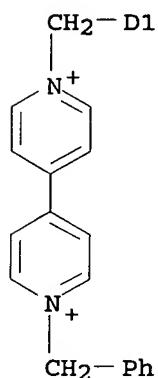
CM 3

CRN 71036-55-0
 CMF C26 H24 N2 . 2 Cl
 CCI IDS

PAGE 1-A

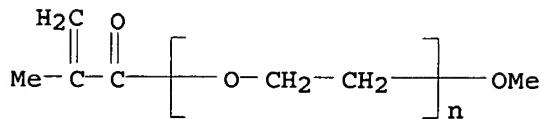


PAGE 2-A



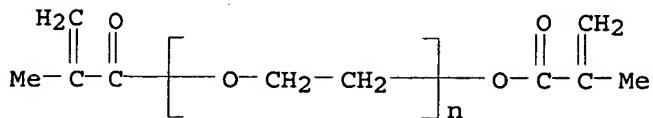
CM 4

CRN 26915-72-0
 CMF (C₂ H₄ O)_n C₅ H₈ O₂
 CCI PMS



CM 5

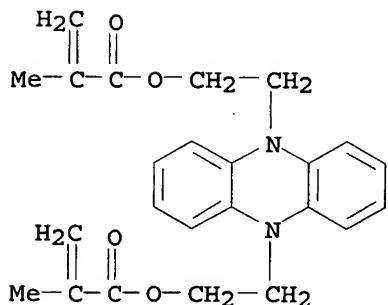
CRN 25852-47-5
 CMF (C₂ H₄ O)_n C₈ H₁₀ O₃
 CCI PMS



RN 265648-17-7 HCAPLUS
 CN 4,4'-Bipyridinium, 1-[(ethenylphenyl)methyl]-1'-(phenylmethyl)-, bis[tetrafluoroborate(1-)], polymer with 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl 3-(5-chloro-2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxybenzenepropanoate, α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl), α -(2-methyl-1-oxo-2-propenyl)- ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and 5,10-phenazinediyl-2,1-ethanediyl bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

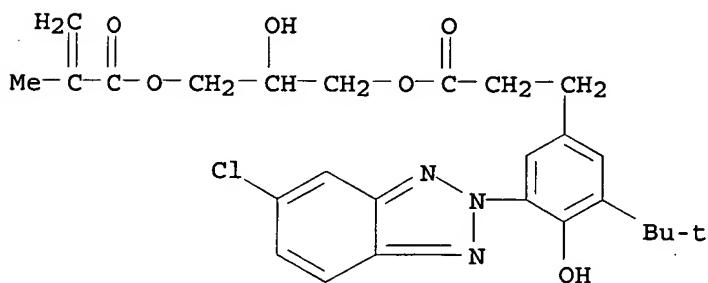
CM 1

CRN 265326-65-6
 CMF C₂₄ H₂₆ N₂ O₄



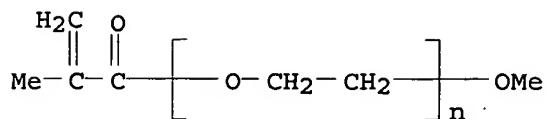
CM 2

CRN 253588-79-3
 CMF C₂₆ H₃₀ Cl N₃ O₆



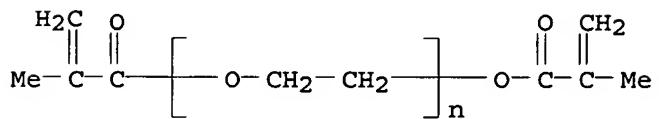
CM 3

CRN 26915-72-0
 CMF (C₂ H₄ O)_n C₅ H₈ O₂
 CCI PMS



CM 4

CRN 25852-47-5
 CMF (C₂ H₄ O)_n C₈ H₁₀ O₃
 CCI PMS



CM 5

CRN 99774-26-2
 CMF C₂₆ H₂₄ N₂ . 2 B F4

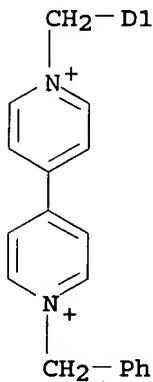
CM 6

CRN 73764-07-5
 CMF C₂₆ H₂₄ N₂
 CCI IDS

PAGE 1-A

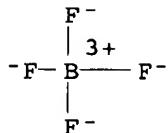
D1-CH=CH₂

PAGE 2-A



CM 7

CRN 14874-70-5
 CMF B F4
 CCI CCS



IC ICM C09K009-02
 ICS G02F001-15
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 72, 74, 76
 IT 265648-12-2 265648-15-5 265648-17-7
 (electrochromic devices with cured ion conductive layers)
 REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L109 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1999:426976 HCAPLUS
 DOCUMENT NUMBER: 131:123026
 TITLE: Electrochromic devices
 INVENTOR(S): Sugiura, Izuru; Kobayashi, Masaaki; Nishikitani, Yoshinori
 PATENT ASSIGNEE(S): Nippon Oil Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 11183940

A

19990709

JP 1997-364869

19971219

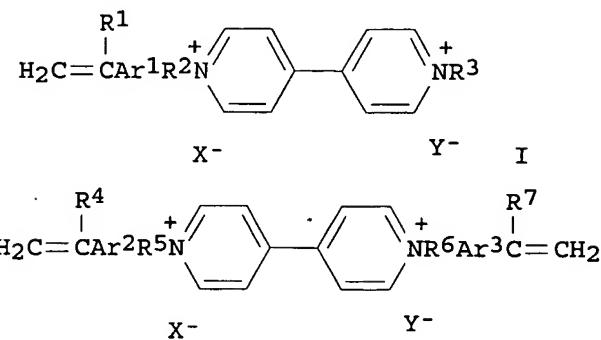
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19971219

PRIORITY APPLN. INFO.:

JP 1997-364869

<--

ED Entered STN: 12 Jul 1999
GI

AB The devices comprise: ≥ 1 transparent conductive layer; and a polymer solid electrolyte comprising a polymer or a copolymer of reactive viologen compds., I and/or II (X^- , Y^- = halo anion, ClO_4^- , BF_4^- , PF_6^- , CH_3COO^- , $\text{CH}_3(\text{C}_6\text{H}_4)\text{SO}_3^-$; $R1$, $R4$, $R7$ = H, $\text{C}_1\text{-5}$ alkyl; $R2$, $R5$, $R6$ = $\text{C}_1\text{-10}$ divalent hydrocarbon; $R3$ = $\text{C}_1\text{-20}$ hydrocarbon; Ar1-3 = divalent aromatic hydrocarbon).

IT 232605-52-6 232605-54-8
(electrochromic devices)

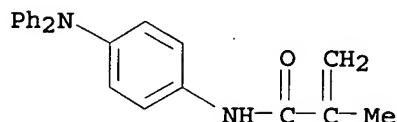
RN 232605-52-6 HCAPLUS

CN 4,4'-Bipyridinium, 1-[(ethenylphenyl)methyl]-1'-(phenylmethyl)-, polymer with N-[4-(diphenylamino)phenyl]-2-methyl-2-propenamide, α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) and α -(2-methyl-1-oxo-2-propenyl)- ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 163684-75-1

CMF C22 H20 N2 O



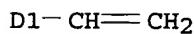
CM 2

CRN 73764-07-5

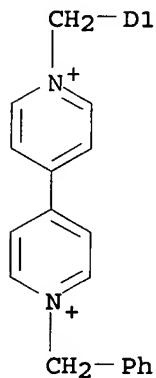
CMF C26 H24 N2

CCI IDS

PAGE 1-A

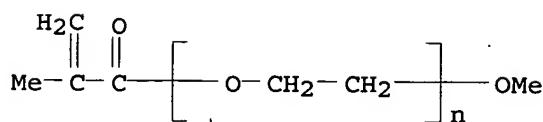


PAGE 2-A



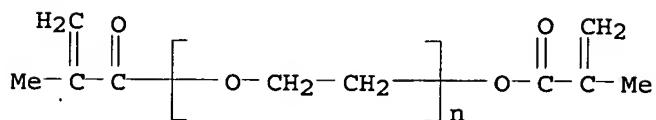
CM 3

CRN 26915-72-0
 CMF (C₂ H₄ O)_n C₅ H₈ O₂
 CCI PMS



CM 4

CRN 25852-47-5
 CMF (C₂ H₄ O)_n C₈ H₁₀ O₃
 CCI PMS



RN 232605-54-8 HCAPLUS
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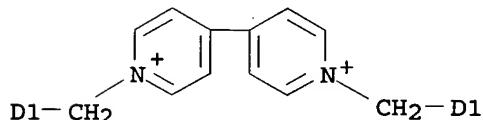
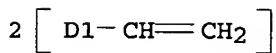
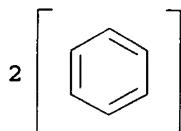
N-[4-(diphenylamino)phenyl]-2-methyl-2-propenamide,
 α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) and α -(2-methyl-1-oxo-2-propenyl)- ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 214272-82-9

CMF C28 H26 N2

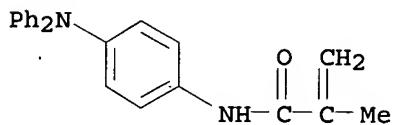
CCI IDS



CM 2

CRN 163684-75-1

CMF C22 H20 N2 O

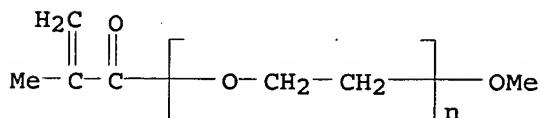


CM 3

CRN 26915-72-0

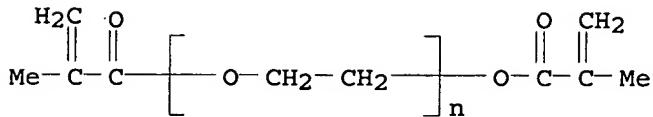
CMF (C2 H4 O)n C5 H8 O2

CCI PMS



CM 4

CRN 25852-47-5
 CMF (C₂ H₄ O)_n C₈ H₁₀ O₃
 CCI PMS



IC ICM G02F001-15
 ICS G02F001-15
 CC 74-9 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 73
 ST electrochromic viologen polymer solid electrolyte
 IT Electrochromic devices
 Solid electrolytes
 (electrochromic devices)
 IT 1332-29-2, Tin oxide 50926-11-9, ITO 232605-52-6
 232605-54-8 232605-56-0 232605-58-2
 (electrochromic devices)

L109 ANSWER 14 OF 16 HCPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1999:366124 HCPLUS
 DOCUMENT NUMBER: 131:158044
 TITLE: Microporous Polymeric Composite
 Electrolytes from Microemulsion
 Polymerization
 AUTHOR(S): Xu, Wu; Siow, Kok-Siong; Gao, Zhiqiang; Lee,
 Swee-Yong; Chow, Pei-Yong; Gan, Leong-Ming
 CORPORATE SOURCE: Department of Chemistry, National University of
 Singapore (NUS), Singapore, 119260, Singapore
 SOURCE: Langmuir (1999), 15(14), 4812-4819
 CODEN: LANGD5; ISSN: 0743-7463
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 15 Jun 1999
 AB Microporous polymeric electrolytes were prepared from
 microemulsion polymerization of the system containing acrylonitrile (AN),
 4-vinylbenzenesulfonic acid lithium salt (VBSLi), ethylene glycol
 dimethacrylate (EGDMA), ω -methoxy poly(ethyleneoxy)40
 undecyl- α -methacrylate (C₁-PEO-C₁₁-MA-40), and water. The
 polymerized-microemulsion solids or membranes have open-cell porous
 microstructure. The water content in membranes can readily be
 exchanged with many organic solvents such as γ -butyrolactone (BL),
 a mixture of ethylene carbonate (EC) and di-Me carbonate (DMC) or
 propylene carbonate (PC) and EC. The membranes can also be filled
 with electrolyte solns. such as 1 M LiBF₄/BL, 1 M
 LiSO₃CF₃/PC-EC, or 1 M LiClO₄/EC-DMC to form polymeric composite
 electrolytes. Such composite electrolytes,
 exhibiting ionic conductivity of 10⁻³ S cm⁻¹ (25°) are suitable for
 use in electrochem. devices.
 IT 237770-04-6DP, Acrylonitrile-ethylene glycol
 dimethacrylate-4-vinylbenzenesulfonic acid, lithium
 salt- ω -methoxy poly(ethyleneoxy)40-undecyl- α -methacrylate

copolymer, lithium complexes

(effects of composition and microemulsion polymerization conditions on structure of microporous poly(ether acrylate)-lithium salt composite electrolytes)

RN 237770-04-6 HCPLUS

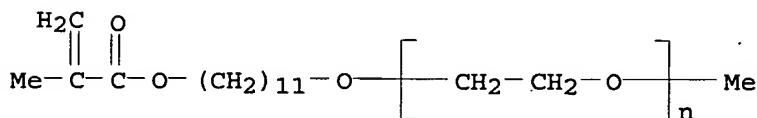
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with lithium 4-ethenylbenzenesulfonate, α -methyl- ω -{[11-[(2-methyl-1-oxo-2-propenyl)oxy]undecyl]oxy}poly(oxy-1,2-ethanediyl) and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 174508-47-5

CMF (C₂ H₄ O)_n C₁₆ H₃₀ O₃

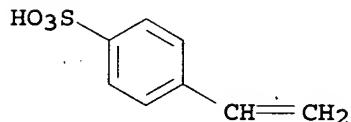
CCI PMS



CM 2

CRN 4551-88-6

CMF C₈ H₈ O₃ S . Li



● Li

CM 3

CRN 107-13-1

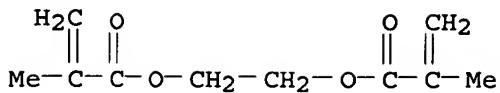
CMF C₃ H₃ N



CM 4

CRN 97-90-5

CMF C₁₀ H₁₄ O₄



CC 35-4 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 36, 72

ST polymer electrolyte composite prepn microemulsion
 methacrylate; porous microstructure acrylic polymer
 electrolyte lithium salt; membrane solid polymer
 electrolyte water exchange solvent; ionic cond polymer
 electrolyte acrylic lithium salt

IT Polyoxyalkylenes, preparation
 (acrylic, lithium complexes; effects of composition and microemulsion
 polymerization conditions on structure of microporous poly(ether
 acrylate)-lithium salt composite electrolytes)

IT Ionic conductivity
 Phase diagram
 Polymer electrolytes
 Swelling, physical
 (effects of composition and microemulsion polymerization conditions on
 structure of microporous poly(ether acrylate)-lithium salt
 composite electrolytes)

IT Polymerization
 (microemulsion; effects of composition and microemulsion polymerization
 conditions on structure of microporous poly(ether acrylate)-lithium
 salt composite electrolytes)

IT Emulsions
 (microemulsions, solids and membranes; effects of composition and
 microemulsion polymerization conditions on structure of microporous
 poly(ether acrylate)-lithium salt composite electrolytes)

IT Polymer morphology
 (phase, porous; effects of composition and microemulsion polymerization
 conditions on structure of microporous poly(ether acrylate)-lithium
 salt composite electrolytes)

IT Supramolecular structure
 (polymer-salt composite; effects of composition and microemulsion
 polymerization conditions on structure of microporous poly(ether
 acrylate)-lithium salt composite electrolytes)

IT 7439-93-2DP, Lithium, polyoxyalkylene-acrylate complexes, preparation
 237770-04-6DP, Acrylonitrile-ethylene glycol
 dimethacrylate-4-vinylbenzenesulfonic acid, lithium
 salt- ω -methoxy poly(ethyleneoxy)40-undecyl- α -methacrylate
 copolymer, lithium complexes
 (effects of composition and microemulsion polymerization conditions on
 structure of microporous poly(ether acrylate)-lithium salt
 composite electrolytes)

IT 7791-03-9, Lithium perchlorate (LiClO₄) 14283-07-9 33454-82-9,
 Lithium trifluoromethanesulfonate
 (electrolyte; effects of composition and microemulsion polymerization
 conditions on structure of microporous poly(ether acrylate)-lithium
 salt composite electrolytes)

IT 96-48-0 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate
 616-38-6, Methyl carbonate
 (exchange solvent; effects of composition and microemulsion polymerization
 conditions on structure of microporous poly(ether acrylate)-lithium
 salt composite electrolytes)

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L109 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1994:537505 HCAPLUS
 DOCUMENT NUMBER: 121:137505
 ORIGINAL REFERENCE NO.: 121:24819a,24822a
 TITLE: Secondary batteries with improved solid polymer electrolyte layers
 INVENTOR(S): Kubota, Tadahiko; Yasunami, Shoichiro; Maekawa, Yukio
 PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06036754	A	19940210	JP 1992-178488 <--	19920706
JP 3379541	B2	20030224		
US 5340672	A	19940823	US 1993-85173 <--	19930702
PRIORITY APPLN. INFO.:			JP 1992-178488 <--	A 19920706

ED. Entered STN: 17 Sep 1994

AB The batteries use solid polymer electrolytes layers containing an electrolyte solution of an alkali metal salt, which are prepared by applying a latex on a porous separator membrane and drying. The latex is preferably a copolymer of a 1st monomer, having 1 polymerizable ethylenic group and nonpolar side chains or nonpolar groups connected to an ester or amido side chain, 0-95, a 2nd monomer, having 1 polymerizable ethylenic group and a cyano group or a polar group connected to an ester or amido side chain, 5-95, a 3rd monomer, having ≥2 polymerizable ethylenic groups and >1 side chain, 1-20, and a 4th monomer, having 1 polymerizable ethylenic group and a side chain containing a crosslink-able group, 1-80 mol.-%.

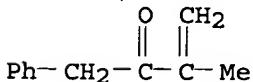
IT 157247-20-6P
(latex, solid polymer electrolyte layers containing, manufacture of, for secondary lithium batteries)

RN 157247-20-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl), 3-methyl-1-phenyl-3-buten-2-one and α-(1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

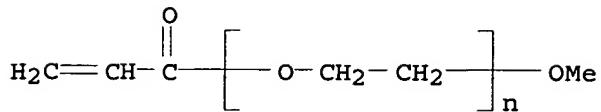
CM 1

CRN 55956-30-4
CMF C11 H12 O



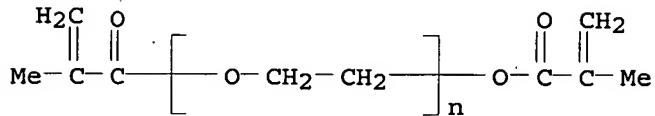
CM 2

CRN 32171-39-4
 CMF (C₂ H₄ O)_n C₄ H₆ O₂
 CCI PMS



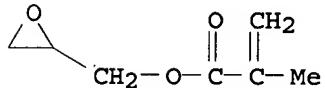
CM 3

CRN 25852-47-5
 CMF (C₂ H₄ O)_n C₈ H₁₀ O₃
 CCI PMS



CM 4

CRN 106-91-2
 CMF C₇ H₁₀ O₃



IC ICM H01M002-16
 ICS H01M004-96; H01M010-40
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 IT **Battery electrolytes**
 (latex-alkali metal salt, solid, compns. and manufacture of)
 IT Rubber, butadiene-styrene, uses
 (polymers with acrylates, solid polymer
 electrolyte layers containing, manufacture of, for secondary lithium
 batteries)
 IT 14283-07-9P, Lithium fluoroborate
 (electrolyte layers containing latex and, manufacture of, for
 secondary lithium batteries)
 IT 157247-10-4P 157247-11-5P 157247-12-6P 157247-13-7P
 157247-14-8P 157247-15-9P 157247-17-1P 157247-18-2P
 157247-19-3P 157247-20-6P 157247-21-7P 157247-22-8P
 (latex, solid polymer electrolyte layers
 containing, manufacture of, for secondary lithium batteries)
 IT 9003-07-0, Polypropylene
 (porous separators, polymer solid electrolytes
 applied on, for secondary batteries)

IT 9003-55-8P

(rubber, polymers with acrylates, solid polymer
electrolyte layers containing, manufacture of, for secondary lithium
batteries)

L109 ANSWER 16 OF 16 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1992:118869 HCPLUS

DOCUMENT NUMBER: 116:118869

ORIGINAL REFERENCE NO.: 116:19859a,19862a

TITLE: Acryloyl-modified polyalkylene oxide copolymer
solid electrolyte

INVENTOR(S): Mizuno, Shinichiro

PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03238704	A	19911024	JP 1990-35449	19900216
<--				
PRIORITY APPLN. INFO.:			JP 1990-35449	19900216
<--				

ED Entered STN: 20 Mar 1992

AB The electrolyte contains a metal salt and a crosslinked resin containing a copolymer of an acryloyl-modified polyalkylene oxide with an organic compound having a double bond and ≥ 1 functional groups. The resin may be crosslinked with a crosslinking agent. An electrolyte containing methoxy-modified polyethylene glycol monoacrylate-2-hydroxyethyl acrylate copolymer and LiClO₄ showed high ion conductivity

IT 139308-66-0 139308-67-1 139308-68-2

139308-69-3

(solid electrolyte, with high ion conductivity)

RN 139308-66-0 HCPLUS

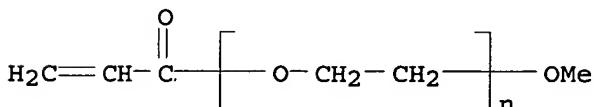
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 32171-39-4

CMF (C₂ H₄ O)_n C₄ H₆ O₂

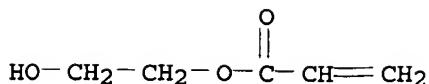
CCI PMS



CM 2

CRN 818-61-1

CMF C₅ H₈ O₃



RN 139308-67-1 HCPLUS

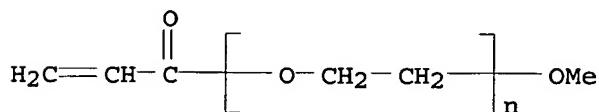
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with
 N,N,N',N',N'',N'''-hexakis(methoxymethyl)-1,3,5-triazine-2,4,6-triamine
 and α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl)
 (9CI) (CA INDEX NAME)

CM 1

CRN 32171-39-4

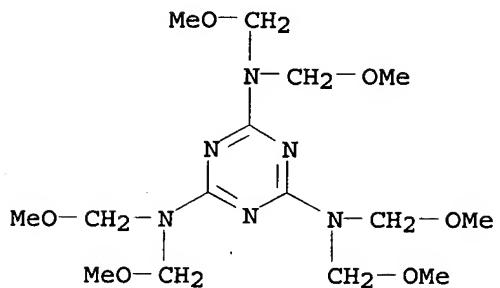
CMF (C₂ H₄ O)_n C₄ H₆ O₂

CCI PMS



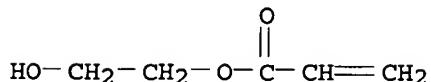
CM 2

CRN 3089-11-0

CMF C₁₅ H₃₀ N₆ O₆

CM 3

CRN 818-61-1

CMF C₅ H₈ O₃

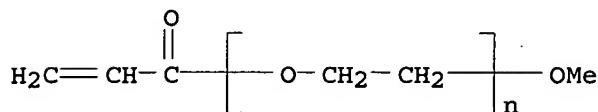
RN 139308-68-2 HCPLUS

CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with
 2,4-diisocyanato-1-methylbenzene and

α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl)
(9CI) (CA INDEX NAME)

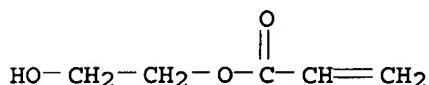
CM 1

CRN 32171-39-4
CMF (C₂ H₄ O)_n C₄ H₆ O₂
CCI PMS



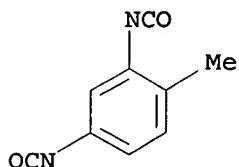
CM 2

CRN 818-61-1
CMF C₅ H₈ O₃



CM 3

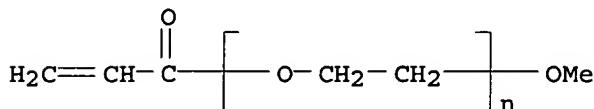
CRN 584-84-9
CMF C₉ H₆ N₂ O₂



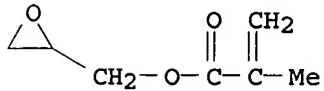
RN 139308-69-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with oxiranylmethyl 2-methyl-2-propenoate and α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

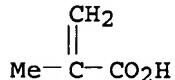
CRN 32171-39-4
CMF (C₂ H₄ O)_n C₄ H₆ O₂
CCI PMS



CM 2

CRN 106-91-2
CMF C7 H10 O3

CM 3

CRN 79-41-4
CMF C4 H6 O2

IC ICM H01B001-06
 ICS C08K003-10; C08L033-14; G02F001-15; H01M006-18; H01M010-40
 CC 76-2 (Electric Phenomena)
 Section cross-reference(s) : 38
 ST acryloyl polyalkylene oxide solid electrolyte
 IT Electrolytes
 (solid, acryloyl-modified polyalkylene oxide copolymer,
 with high ion conductivity)
 IT 7791-03-9, Lithium perchlorate
 (acryloyl-modified polyalkylene oxide copolymer solid
 electrolyte containing)
 IT 139308-66-0 139308-67-1 139308-68-2
 139308-69-3
 (solid electrolyte, with high ion conductivity)

=> d his nofile

(FILE 'HOME' ENTERED AT 11:01:43 ON 14 NOV 2008)

FILE 'HCAPLUS' ENTERED AT 11:02:41 ON 14 NOV 2008
 L1 1 SEA ABB=ON PLU=ON US20070040145/PN
 SEL RN

FILE 'REGISTRY' ENTERED AT 11:02:55 ON 14 NOV 2008
 L2 14 SEA ABB=ON PLU=ON (19438-60-9/BI OR 31305-94-9/BI OR
 584-84-9/BI OR 697284-07-4/BI OR 7791-03-9/BI OR 848439-41-
 8/BI OR 848439-42-9/BI OR 848439-43-0/BI OR 848439-44-1/BI
 OR 848442-02-4/BI OR 848442-03-5/BI OR 849950-63-6/BI OR
 877834-07-6/BI OR 877837-29-1/BI)
 L3 7 SEA ABB=ON PLU=ON L2 AND 3/NC

FILE 'HCAPLUS' ENTERED AT 11:03:45 ON 14 NOV 2008
 L4 3 SEA ABB=ON PLU=ON L3

FILE 'REGISTRY' ENTERED AT 11:45:04 ON 14 NOV 2008
 L5 STR
 L6 STR
 L7 SCR 2043
 L8 50 SEA SSS SAM L5 AND L6
 L9 STR L5
 L10 50 SEA SSS SAM L9 AND L6 AND L7
 L11 STR L6
 L12 50 SEA SSS SAM L9 AND L11 AND L7
 L13 STR
 L14 50 SEA SSS SAM L9 AND L11 AND L13 AND L7
 L15 136955 SEA SSS FUL L9 AND L11 AND L7
 L16 3 SEA ABB=ON PLU=ON L15 AND L2
 L17 4 SEA ABB=ON PLU=ON L3 NOT L16
 SAV L15 BER998/A
 L18 50 SEA SUB=L15 SSS SAM L13
 L19 STR
 L20 50 SEA SUB=L15 SSS SAM L19
 L21 365051 SEA ABB=ON PLU=ON PACR/PCT
 L22 308947 SEA ABB=ON PLU=ON PETH/PCT
 L23 132698 SEA ABB=ON PLU=ON PSTY/PCT
 L24 6163 SEA ABB=ON PLU=ON L15 AND L21 AND L22 AND L23
 L25 STR L9
 L26 50 SEA SUB=L15 SSS SAM L25
 L27 STR L11
 L28 50 SEA SUB=L15 SSS SAM (L25 AND L27 AND L19)
 L29 STR L9
 L30 50 SEA SUB=L15 SSS SAM L29
 L31 STR L29
 L32 50 SEA SUB=L15 SSS SAM L31
 L33 STR L27
 L34 50 SEA SUB=L15 SSS SAM (L29 AND L33)
 L35 109186 SEA SUB=L15 SSS FUL (L29 AND L33)
 L36 3 SEA ABB=ON PLU=ON L35 AND L2
 L37 25925 SEA ABB=ON PLU=ON L35 AND L23
 L38 25040 SEA ABB=ON PLU=ON L37 NOT P/ELS
 L39 22884 SEA ABB=ON PLU=ON L38 NOT SI/ELS
 L40 STR L33
 L41 50 SEA SUB=L35 SSS SAM L40
 L42 54341 SEA SUB=L35 SSS FUL L40

L43 16281 SEA ABB=ON PLU=ON L42 AND L23
 SAV L42 TEMP BER998A/A

L44 0 SEA ABB=ON PLU=ON L43 AND L2
 3 SEA ABB=ON PLU=ON L39 AND L2

L45 35853 SEA ABB=ON PLU=ON 868-77-9/CRN
 20350 SEA ABB=ON PLU=ON 818-61-1/CRN
 19565 SEA ABB=ON PLU=ON 106-91-2/CRN
 15426 SEA ABB=ON PLU=ON L39 AND (L46 OR L47 OR L48)
 4531 SEA ABB=ON PLU=ON 26915-72-0/CRN
 80446 SEA ABB=ON PLU=ON 100-42-5/CRN
 232 SEA ABB=ON PLU=ON L49 AND L50
 159 SEA ABB=ON PLU=ON L51 AND L52
 11 SEA ABB=ON PLU=ON L53 AND 3/NC

FILE 'HCAPLUS' ENTERED AT 12:32:13 ON 14 NOV 2008

L55 15 SEA ABB=ON PLU=ON L54
 99 SEA ABB=ON PLU=ON L53
 8 SEA ABB=ON PLU=ON L56 AND SOLID(2A) ELECTROLYT?
 13 SEA ABB=ON PLU=ON L58 AND SOLID(2A) ELECTROLYT?
 21 SEA ABB=ON PLU=ON L57 OR L59

FILE 'REGISTRY' ENTERED AT 13:07:23 ON 14 NOV 2008

L61 232 SEA ABB=ON PLU=ON L49 AND L50
 159 SEA ABB=ON PLU=ON L61 AND L51

FILE 'HCAPLUS' ENTERED AT 13:07:51 ON 14 NOV 2008

L63 118 SEA ABB=ON PLU=ON L61
 8 SEA ABB=ON PLU=ON L63 AND SOLID(2A) ELECTROLYT?
 21 SEA ABB=ON PLU=ON L60 OR L64
 13 SEA ABB=ON PLU=ON L65 NOT L55
 8 SEA ABB=ON PLU=ON L55 AND (1840-2003)/PRY,AY,PY
 9 SEA ABB=ON PLU=ON L66 AND (1840-2003)/PRY,AY,PY

FILE 'REGISTRY' ENTERED AT 13:10:10 ON 14 NOV 2008

E (C2 H4 O)N C5 H8 O2/MF
 E (C2 H4 O)N C4 H6 O2/MF

L69 6 SEA ABB=ON PLU=ON "(C2 H4 O)N C4 H6 O2"/MF
 0 SEA ABB=ON PLU=ON L69 AND L21
 6 SEA ABB=ON PLU=ON L69 AND L22
 14180 SEA ABB=ON PLU=ON L21 AND L22 AND L23
 6163 SEA ABB=ON PLU=ON L72 AND L15

FILE 'HCAPLUS' ENTERED AT 13:14:54 ON 14 NOV 2008

L74 3225 SEA ABB=ON PLU=ON L73
 2484 SEA ABB=ON PLU=ON L74 AND (1840-2003)/PRY,AY,PY
 12 SEA ABB=ON PLU=ON L75 AND SOLID(2A) ELECTROLYT?
 8 SEA ABB=ON PLU=ON L76 NOT L55
 11 SEA ABB=ON PLU=ON L68 OR L77

FILE 'REGISTRY' ENTERED AT 13:31:57 ON 14 NOV 2008

L79 2255 SEA ABB=ON PLU=ON 25736-86-1/CRN
 1190 SEA ABB=ON PLU=ON 32171-39-4/CRN
 4 SEA ABB=ON PLU=ON 84180-83-6 /CRN
 1 SEA ABB=ON PLU=ON 119202-21-0 /CRN
 3114 SEA ABB=ON PLU=ON L15 AND (L79 OR L80 OR L81 OR L82)
 663 SEA ABB=ON PLU=ON L83 AND (L46 OR L47 OR L48)

FILE 'HCAPLUS' ENTERED AT 13:34:29 ON 14 NOV 2008

L85 356 SEA ABB=ON PLU=ON L84
 9 SEA ABB=ON PLU=ON L85 AND SOLID(2A) ELECTROLYT?

L87	16 SEA ABB=ON	PLU=ON	L85 AND ELECTROLYT?
L88	16 SEA ABB=ON	PLU=ON	L86 OR L87
L89	7 SEA ABB=ON	PLU=ON	L88 AND (1840-2003)/PRY,AY,PY
L90	8 SEA ABB=ON	PLU=ON	L55 AND (1840-2003)/PRY,AY,PY
L91	4 SEA ABB=ON	PLU=ON	L90 AND ELECTROLYT?
L92	8 SEA ABB=ON	PLU=ON	L90 OR L91
L93	10316 SEA ABB=ON	PLU=ON	L56 OR L58 OR L63
L94	89 SEA ABB=ON	PLU=ON	L93 AND ELECTROLYT?
L95	71 SEA ABB=ON	PLU=ON	L94 AND (1840-2003)/PRY,AY,PY
L96	67 SEA ABB=ON	PLU=ON	L95 NOT L92
L97	9 SEA ABB=ON	PLU=ON	L96 AND L65
L98	6 SEA ABB=ON	PLU=ON	L96 AND L76
L99	9 SEA ABB=ON	PLU=ON	L96 AND L78
L100	25 SEA ABB=ON	PLU=ON	L88 OR L97 OR L98 OR L99
L101	25 SEA ABB=ON	PLU=ON	L100 NOT L92
L102	0 SEA ABB=ON	PLU=ON	L85 AND L96
L103	88 SEA ABB=ON	PLU=ON	L85 AND L93
L104	1 SEA ABB=ON	PLU=ON	L103 AND ELECTROLYT?
L105	16 SEA ABB=ON	PLU=ON	L88 OR L104
L106	83 SEA ABB=ON	PLU=ON	(L96 OR L97 OR L98 OR L99 OR L100 OR L101)
L107	18 SEA ABB=ON	PLU=ON	L106 AND SOLID(3A) ELECTROLYT?
L108	25 SEA ABB=ON	PLU=ON	L105 OR L107
L109	16 SEA ABB=ON	PLU=ON	L108 AND (1840-2003)/PRY,AY,PY